BROWNS' SCHOOL SERIES.

A MANUAL OF MUSIC.

PREPARED SPECIALLY FOR PUPIL TEACHERS, STUDENTS IN TRAINING COLLEGES, AND THOSE PREPARING FOR THE OXFORD AND CAMBRIDGE LOCAL EXAMINATIONS.

BY

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PREFACE.

THE following work, prepared to meet the requirements of the Committee of Council, Trinity College, and University Local Examinations, will, it is believed, supply a want which has been very generally felt by Teachers,—viz., a full and elementary work on the subject. Many points which are usually reserved for subsequent explanation are introduced, as it may seem, prematurely, in order that the work may be of general utility. At the end of each Chapter a series of Exercises have been appended; while at the end of the work there are several Examination Papers. The author hopes that it will be found suitable for Pupil Teachers, Candidates for Queen's Scholarships, Students in Training Colleges, and for those preparing for the above-mentioned Examinations.

J L W.

CONTENTS.

RUDIMENTS OF MUSIC.

CHAPTER I.

Notes.

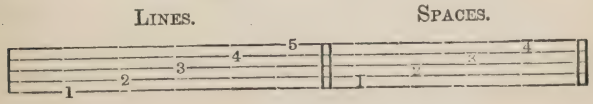
1. MUSIC.—Music is the art which expresses ideas and feelings through the medium of sound.

2. Sound is produced by vibrations excited in the air.

3. When the vibrations of the air are regular, *musical sounds* are produced; but when the vibrations do not succeed each other regularly, the sound is termed *noise.*

4. NOTES.—Musical sounds are represented by characters which are termed notes, and which are designated by the first seven letters of the alphabet,—viz., A, B, C, D, E, F, and G.

5. THE STAFF.—The notes are written upon five horizontal and parallel lines called a Staff, or Stave. These five lines include four spaces, and form in all nine steps or *degrees.* The lines and spaces are counted from the bottom of the Staff upward, thus:—



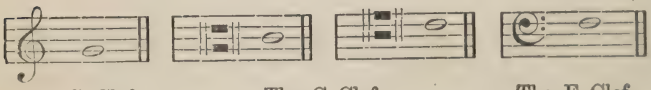
6. LEGER LINES.—In order to represent sounds higher or lower than those on a single Staff, *short* lines are added above or below. These lines are called Leger Lines.

7. Leger Lines may be added to any extent or number.

8. PITCH.—The position of the notes on the Staff shews the height or *pitch* of their sound.

9. CLEFS.—At the beginning of every Staff there is written a character called a Clef, by means of which the pitch of a certain note is determined or represented.

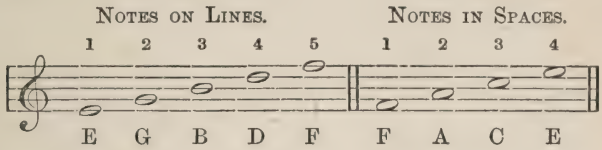
10.—There are several kinds of Clefs, but those most generally used are the G Clef, F Clef, and C Clef.



The G Clef. The C Clef. The F Clef.

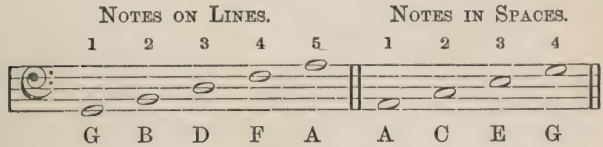
11. THE G CLEF.—The G Clef is placed on the second line of the staff, and gives to every note standing on that line the name of G, from which the others respectively take their names. The G Clef is also called the Treble Clef.

12. NOTES ON THE TREBLE STAFF.—The names of the notes on the Treble Staff are as follow:—

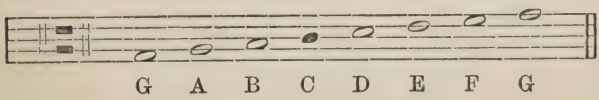


13. THE F CLEF.—This Clef is placed on the fourth line of the lower Staff (par. 17), and gives the name of F to every note standing on that line. This Staff takes the notes which are sung by the *lowest* kinds of men's voices, and for that reason is called the Bass Clef.

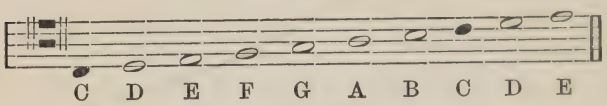
14. NOTES ON THE BASS STAFF.—The names of the notes on the Bass Staff are as follow:—



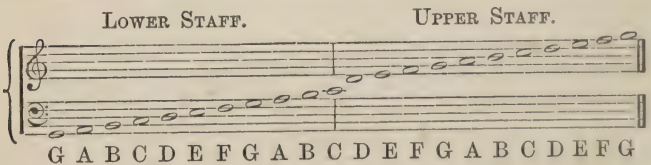
15. THE C CLEF—ALTO.—This Clef is placed on the *third* line, to which it gives the name of C. This Clef is used for the lowest voices of women and the highest voices of men, and is called the *Alto Clef*.



16. THE C CLEF—TENOR.—This Clef is placed on the *fourth* line, to which it gives the name of C. This Clef is used for the voices between the Alto and Bass, and is termed the *Tenor Clef.*



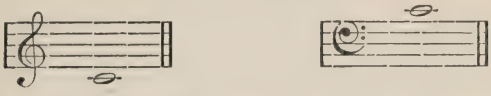
17. THE GREAT STAFF.—A Staff of five lines will only allow eleven sounds to be represented, therefore a second Staff of five lines is added, and are connected by an intermediate line. These two Staves together make the Great Staff, on which twenty-two sounds capable of being produced by the human voice can be represented. The Treble Staff (par. 12) forms the *upper*, and the Bass Staff (par. 14) the *lower* Staff.



18. MIDDLE C.—The student will perceive that the notes on the line connecting the lower Staff with the higher is common to both. It is called MIDDLE C.

19.—OCTAVE.—As before stated, the first seven letters of the alphabet are used to designate the notes, for no more are necessary, as the scale consists of only seven different sounds. The eighth sound is so nearly related to the first that it is similarly named. This eighth sound is called the OCTAVE. For instance, C to C, B to B, are Octaves.

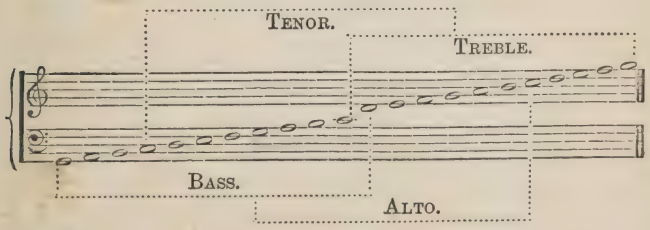
20. RELATION OF TREBLE STAFF TO BASS STAFF.—Middle C can be represented either on the Treble or Bass Staff,—*e. g.*,



but the pitch of each is *identical.* Other notes can thus be shewn to be of the *same* pitch. Take, for instance, the second leger line below the Treble Staff, and by looking at the Great Staff, we see that it is the *same* note as that on the fifth line of the Bass Staff, and consequently is of the *same* pitch.

21. VOICES.—The following are the different kinds of the human voice:—(1,) Voices of women and boys; (2,) voices of men. The former consists of *treble* or *soprano*, second treble or mezzo-soprano, *alto* or *contralto.* The voices of men are *tenor*, *baritone*, and *bass.*

22. The following diagram shews the average compass or range of the principal voices:—



23. SCORES.—A Score is a piece of music which shews to the eye, on parallel Staves, the whole of the parts, vocal or instrumental, for which it is composed.

24. The SHORT SCORE contains only two Staves, the Treble and Bass, the Treble and Alto parts being written on the former, and the Tenor and Bass on the latter.

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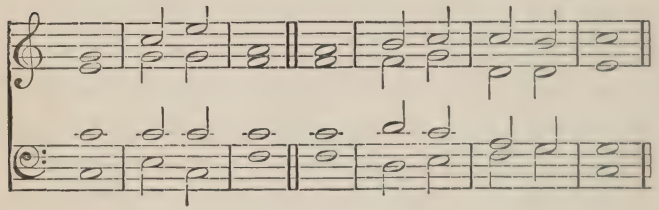

25. In Full Score the various parts are written on separate Staves. The Treble, Alto, and Tenor parts are written on the Treble Staff, and the Bass on the Bass Staff. The Tenor notes are to be sung an octave lower than they are represented.

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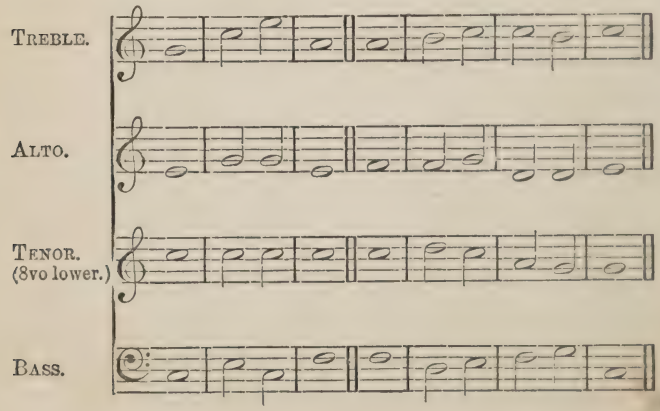
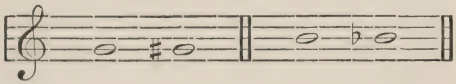
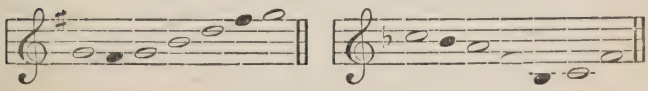


26. TONE AND SEMITONE.—The notes as written on the staff in their original state are called *natural* notes. The difference in pitch between any note and that immediately above is termed a *degree*, of which there are two kinds,—a larger, called a TONE, and a lesser, called a half-tone, or SEMITONE.

27. SHARPS—FLATS.—Any of the notes may be *raised* a semitone by prefixing a sign called a SHARP, ♯, or *lowered* a semitone by prefixing a FLAT, ♭. Thus, in the following the note G is raised a semitone by means of a Sharp, and is called G ♯, while the note B is flattened a semitone, and is called B ♭.

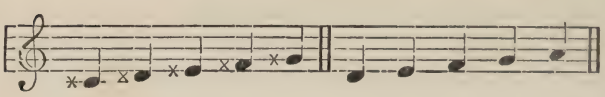


28. Sharps and Flats, placed immediately after the Clef, affect every note on the *same* lines or spaces upon which they stand. In the example below, the ♯ raises both the notes F a semitone, while the ♭ lowers both the B's a semitone.



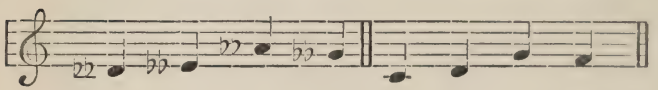
29. DOUBLE SHARPS.—A Double Sharp, ×, placed before any note raises its pitch two semitones, or one tone.

As Written. As Played.



30. DOUBLE FLATS.—A Double Flat ♭♭, placed before any note, lowers its pitch two semitones, or one tone.

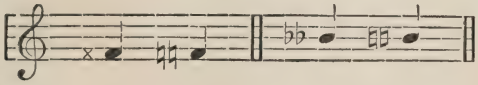
As Written. As Played.



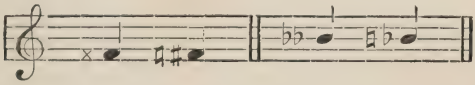
31. NATURAL.—When a note has been raised a semitone by a Sharp ♯, or lowered a semitone by a Flat ♭, it is often necessary to restore it to its original pitch. This is done by means of a sign termed a Natural ♮.

32. ACCIDENTALS.—Occasionally Sharps, Flats, and Naturals are used *temporarily*, in which case they are termed Accidentals. They affect all the notes of the same name that follow them in the *same* measure.

33. DOUBLE NATURAL.—The effect of a double Sharp or double Flat may be revoked by a DOUBLE NATURAL ♮♮.



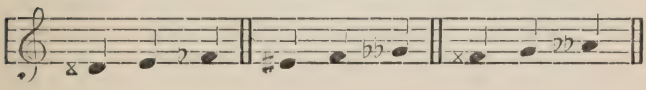
34. If the note to which a double Sharp or double Flat is prefixed, is followed by the *same* note with *one* Sharp or Flat, a Natural and Sharp, or Natural and Flat, as the case may be, are placed before it, the Natural cancelling one of the previous Sharps or Flats.



35. The signs ♯, ♭, ×, ♭♭, ♮, are called CHROMATIC SIGNS; and if they occur in a passage of music, it is termed a chromatic passage.

36. By using the above signs, every sound may be represented in three positions, the pitch in each case being *identical.*

SAME PITCH. SAME PITCH. SAME PITCH.



Exercise I.

1. Define Music. What is the difference between a musical sound and noise?

2. What is meant by Staff, Pitch, Leger Line, and Great Staff?

3. What is a Clef? Write the Clef signs of the Treble and Bass.

4. Enumerate the different kinds of voices, and draw a diagram to shew the compass of each.

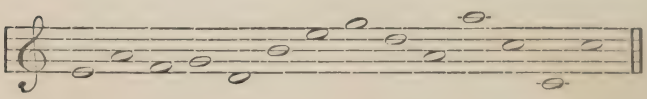
5. What is an Octave?

6. How are musical sounds represented?

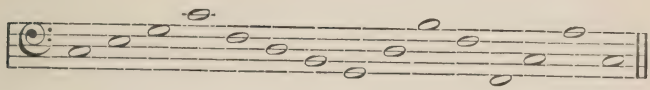
Exercise II.

1. Shew that the note on the first line of the Treble Stave is of the same pitch as that on the second Leger Line above the Bass Staff.

2. Write over each of the following notes its pitch name, (C, D, &c.)

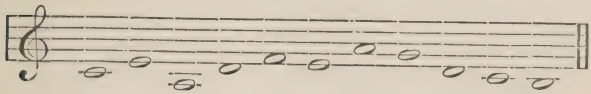


3. Write over each of the following notes its pitch name.

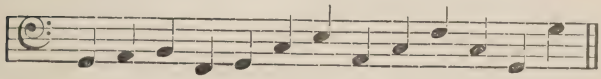


4. On the Treble Staff write down the compass of the Treble and Alto Voices; and on the Bass Staff the compass of the Tenor and Bass.

5. Write the following notes at the *same* pitch on the Bass Staff.



6. Write the Octaves of these notes on the Bass Staff.



EXERCISE III.

1. Define Degree, Natural Notes, Pitch, Tone, and Semitone.

2. What is a Sharp? what is a Flat? and what are their uses?

3. What notes do Sharps or Flats affect when placed immediately after the Clef?

4. What effect has a Double Sharp when placed before a note?

5. What effect has a Double Flat when placed before a note?

6. What is a Natural? What are Accidentals?

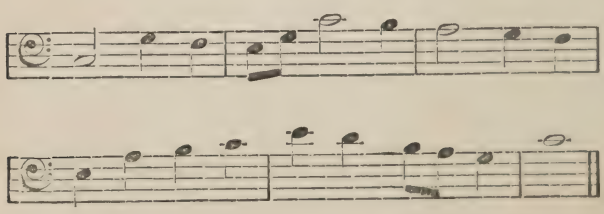
7. What name is given to the signs ♯, ♭, ×, ♭♭, and ♮?

8. Shew how any note may be represented on three positions, the pitch of each being the same.

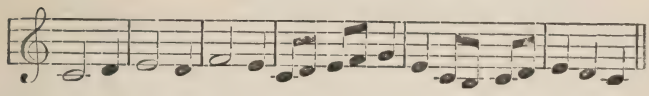
9. Can the pitch of a note be raised or lowered a tone? Write the sign used for the purpose.

Exercise IV.

1. Write the following, at the same pitch, on the Treble Stave:—



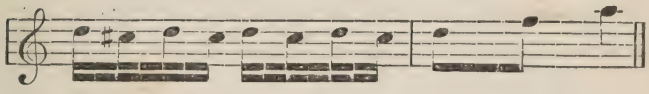
2. Write the following, at the same pitch, on the Bass Staff:—



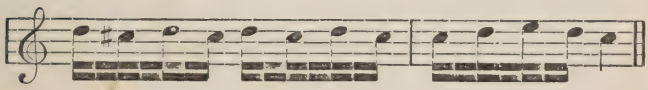
3. What (1) do the Sharps and Flats placed after the Clef at the beginning of every piece of music signify? (2) Those occasionally appearing before notes? (3) How long do these last affect the notes?

4. Illustrate your last answer on the following measures:—

1.



2.



3.

5. Write the Clef signs of the Alto and Tenor.

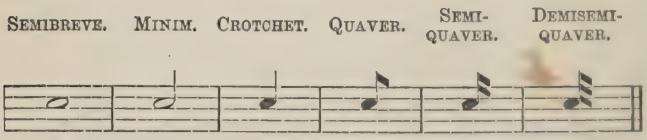
6. What is the Great Staff? Write all the notes it will contain.

CHAPTER II.

Length or Duration of Sounds.

37. The relative duration or value of the notes does not depend at all upon their position on the Staff, but upon their shape or form.

38. KINDS OF NOTES.—The different durations are indicated by differently formed notes. In modern music there are six kinds of notes used.



Each of the above notes is equal to one-half of that immediately preceding it. Thus the Minim is one-half of the Semibreve; the Crotchet is one-half of the Minim, and therefore one-quarter of the Semibreve; and so on.

39. The following table will shew more fully the relative value of the notes:—

One Semibreve— is equal to

Two Minims— or

Four Crotchets— or

Eight Quavers— or

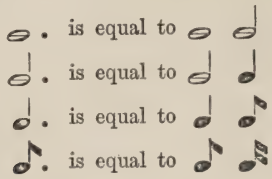
Sixteen Semiquavers— or

Thirty-two Demisemiquavers—

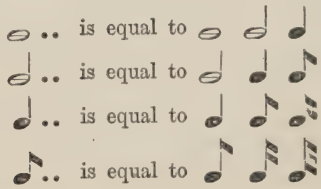
Note.—The stems of the notes may be turned either up or down.

40. It is usual, in instrumental music, to join the stems of two or more Quavers, Semiquavers, or Demisemiquavers, but it does not alter their duration.

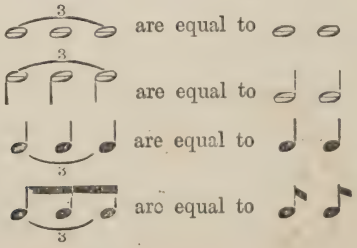
41. DOTTED NOTES.—A dot placed after any note increases its value by one-half its length,—*e. g.*,



42. Two dots placed after any note increase the length of the note by three-fourths of its original value,—*e. g.*,



43. TRIPLETS.—Occasionally three notes of *equal* value are grouped together, and a figure 3 placed over or under them. These notes are to have the *same* duration which would be given to two notes of similar value. Such a group is called a TRIPLET.



44. A group of four notes representing the duration of three of the same kind is called a QUADRUPLET; and a group of five notes representing the value of four is called a QUINTUPLET.

45. RESTS.—Rests are characters which denote silence. Each kind of note has its equivalent Rest. Their forms are as follow:—

SEMIBREVE REST.	MINIM REST.	CROTCHET REST.	QUAVER REST.	SEMIQUAVER REST.	DEMISEMI-QUAVER REST.

46. DOTTED RESTS.—Dots placed after Rests affect them in the same manner as they do the notes. One dot placed after a Rest increases its length by one-half of its valve.

is equal to and
is equal to and
is equal to and
is equal to and

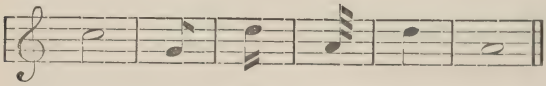
47. Two dots placed after any Rest increases the length of that Rest by three-fourths of its original value,—*e. g.*,

is equal to
is equal to
is equal to
is equal to

Exercise I.

1. How is duration of sound represented in Music? Write down the different kinds of notes, and name them.

2. Write under each of the following its duration name:—

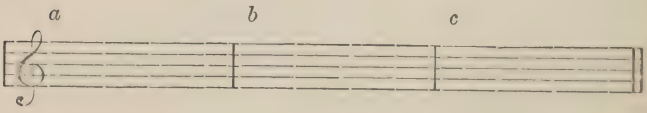


3. How many Crotchets are equal to two Minims? How many Quavers are equal to four Crotchets? How many Quavers are equal to two Semibreves?

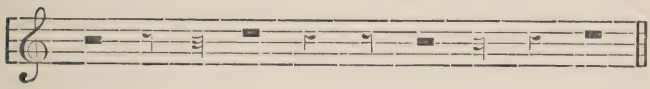
4. What is the effect of a dot following a note? Give examples of various notes with dots, and explain their effect.

5. How is silence represented? Describe the signs which denote silence, and write them down.

6. Write in *a* as many Crotchets as are equal to two Minims; in *b* as many Quavers as are equal to three Crotchets; and in *c* as many Minims as are equal to three Semibreves.



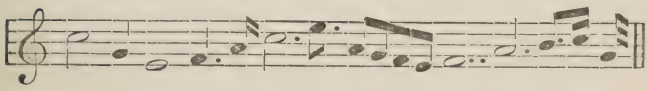
7. Write under each of the following Rests its name:—



Exercise II.

1. What is the effect of two dots following a note? Give examples and explanations.

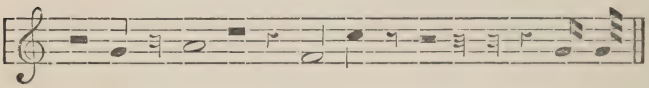
2. Write the names which denote the duration of the following notes:—



3. How many Quavers are equal to a dotted Minim? How many Crotchets are equal to a dotted Semibreve? How many Semiquavers are equal to a Minim and a dotted Crotchet? How many Quavers are equal to two dotted Crotchets?

4. Write over each of the following notes its pitch name, (C, D, &c.,) and under each its duration name.

5. Substitute notes for the following rests, and rests for the notes:—

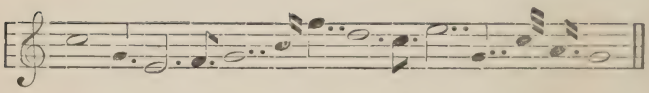


6. What is the value in Quavers of a Minim with a double dot? a Semibreve with one dot? and a Minim with one dot?

Exercise III.

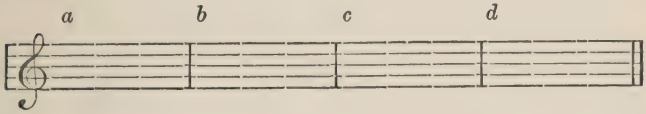
1. The duration of notes is expressed by variation in their forms. Shew these forms, and make a table shewing their relative value.

2. Substitute notes for the rests, and rests for the notes in the following:—



3. On the Treble Staff write six different groups of notes, each group consisting of notes equal to three Minims.

4. Write in *a*, F as a Minim; in *b*, G as a Crotchet; in *c*, A as a Semibreve; and in *d*, B as a Semiquaver.



5. Write on a Staff as many Quavers as are equal to a Minim; as many Crotchets as are equal to a dotted Semibreve; as many Quavers as are equal to a dotted Semibreve; and as many Crotchets as are equal to one Semibreve and a dotted Minim.

6. Explain the effect of a figure 3, when placed over notes of equal value. What is the name given to the combination? Are other combinations of notes used? How can you recognize them?

CHAPTER III.

Time.

48. ACCENT.—A succession of sounds sung or played with the same degree of stress on each sound, if continued for some time, would be unsatisfactory, monotonous, and unpleasing to the ear. It is, therefore, necessary that some sounds should be performed with greater force or *stress* on them than on others. This stress is called Accent.

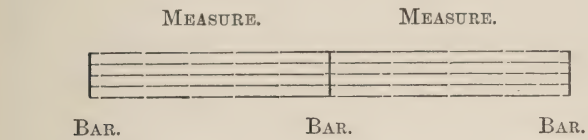
49. Accent therefore imparts spirit and expression to Music.

50. RHYTHM. — Rhythm is the symmetrical arrangement of the accent.

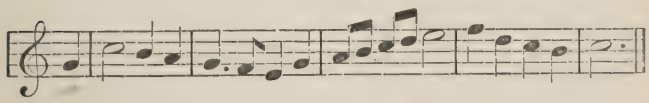
51. In order to mark with certainty the place of the *strong* accent, a perpendicular line is drawn across the Stave. This line is called a Bar or Bar-Line. The strong accent always falls immediately after the Bar-Line.

52. A DOUBLE BAR denotes the conclusion of a passage; but they do not always mark the place of an accent.

53. MEASURES.—The term Bar is often applied to the *distance* between two Bars, but the proper term is *Measure.*



54. A Measure may consist entirely of notes or rests, or a mixture of both. Every Measure of the *same* kind occupies the *same* space of time in performance. In the following example, each Measure, with the exception of the first and last, is equal to four Crotchets. The first and last Measures are *incomplete,* and the remainder are *complete.*

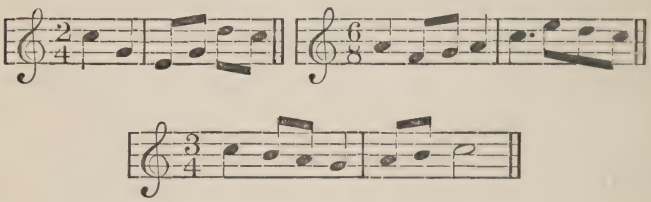


55. TIME.—The division of music into Measures is called TIME.

56. KINDS OF TIME.—There are two kinds of Time,—viz., DUPLE TIME and TRIPLE TIME; both of which are again subdivided into SIMPLE and COMPOUND.

57. BEATS.—The duration of a Measure is counted by *beats;* each Measure containing a certain number of parts or beats, each of which is variously represented by a Minim, Crotchet, &c.

58. TIME SIGNATURES.—At the commencement of every piece of music it is usual to indicate the *kind* of Time by a sign called a TIME SIGNATURE.

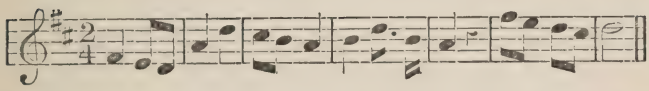


59. Time Signatures consist of fractions,—*e.g.*, $\frac{2}{4}$, $\frac{6}{8}$, $\frac{3}{4}$, &c., having reference to the Semibreve, which is taken as the standard or unit of measurement. The upper figure denotes the number each Measure contains, while the lower figure denotes the quality. For instance, $\frac{2}{4}$ means that there are *two quarter* notes (Crotchets) in each Measure; $\frac{2}{8}$ means two eighth notes, &c.

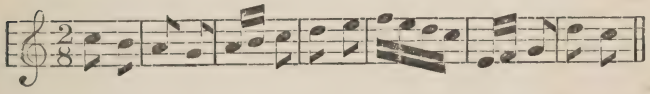
60. SIMPLE DUPLE TIME.—Simple Duple Time is that on which each Measure can be most naturally divided into two equal parts. In this Time the *first part* or beat is accented, and the *second* part unaccented. The signatures are $\frac{2}{4}$, $\frac{2}{8}$, $\frac{2}{2}$.

61. TWO-FOUR TIME.—Two-Four Time $\left(\frac{2}{4}\right)$ consists of two beats in each Measure, each beat being of the value of $\frac{1}{4}$ of a Semibreve, or a Crotchet; there-

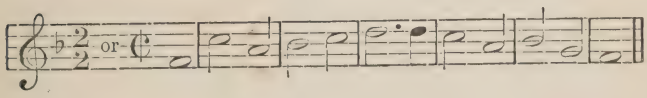
fore, each Measure contains two Crotchets, or their equivalents.



62. Two-Eight Time.—Two-eight Time $\left(\frac{2}{8}\right)$ consists of two beats in a Measure, each beat being equal to $\frac{1}{8}$ of a Semibreve, or a Quaver; therefore, each measure contains two Quavers, or notes equal to them,—*e. g.*,

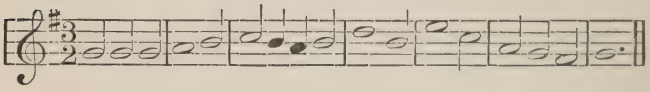


63. Two-Two Time.—Two-two Time $\left(\frac{2}{2}\text{ or }\text{¢}\right)$ consists of two parts or beats to a measure, each beat being of the same duration as $\frac{1}{2}$ of a Semibreve, or one Minim; each measure, therefore, contains two Minims, or notes equivalent to them,—*e. g.*,

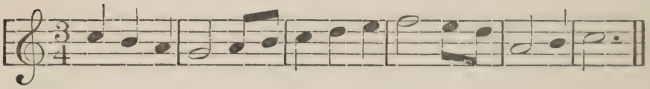


64. SIMPLE TRIPLE TIME.—In Simple Triple Time the accent falls on the first part (or beat) of each measure, the second and third parts being unaccented. The signatures are $\frac{3}{2}$, $\frac{3}{4}$, $\frac{3}{8}$, and $\frac{3}{16}$.

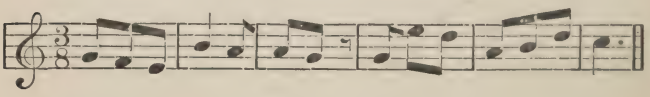
65. THREE-TWO TIME.—Three-two Time consists of three parts in each measure, each part being $\frac{1}{2}$ of a Semibreve; therefore each measure contains three Minims, or notes of equal duration,—*e. g.*,



66. THREE-FOUR TIME.—Three-four Time $\left(\frac{3}{4}\right)$ consists of three parts, each being $\frac{1}{4}$ of a Semibreve, or a Crotchet; therefore each measure contains three Crotchets, or their equivalents,—*e. g.*,



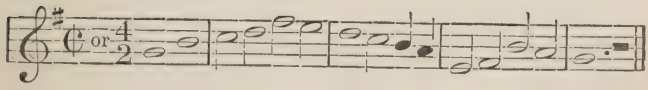
67. THREE-EIGHT TIME.—In Three-eight Time $\left(\frac{3}{8}\right)$ each measure consists of three parts, each being equal in duration to a Quaver, or $\frac{1}{8}$ of a Semibreve. Each measure will consequently contain three Quavers or their equivalents.



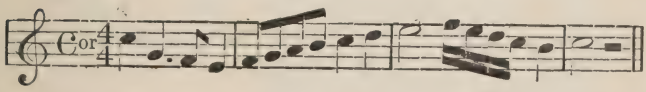
68. COMPOUND DUPLE TIME.—Compound Duple Time is that which is formed by the combination of two Simple Duple Measures, or two Simple Triple Measures.

69. The following are the signatures of the various kinds of Compound Duple Time:—$\frac{\text{C}}{\text{C}}$ or $\frac{4}{2}$, $\frac{\text{C}}{\text{C}}$ or $\frac{4}{4}$, $\frac{4}{8}$, $\frac{4}{16}$, $\frac{6}{4}$, $\frac{6}{8}$, $\frac{12}{4}$, &c.

70. Four-Two Time.—Four-two Time ($\frac{\text{C}}{\text{C}}$ or $\frac{4}{2}$) consists of two *Two-two Measures;* each measure contains four Minims, or notes equivalent to them. The strong accent is on the first note, and the weak accent on the third. The second and fourth notes are unaccented.

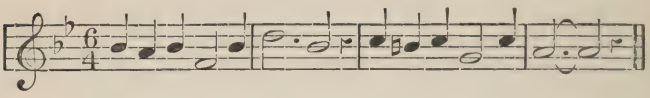


71. Four-Four Time.—Four-four Time ($\frac{4}{4}$), generally called Common Time, consists of two *Two-four Measures.* Each measure consists of four beats, each being equal to $\frac{1}{4}$ of a Semibreve, or a Crotchet; therefore, there are four Crotchets, or notes equal in duration to them, in each measure. The accent falls on the same notes as in Four-two Time.

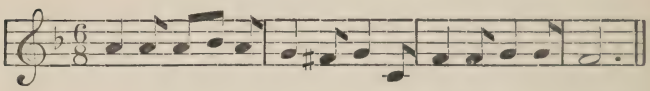


72. Six-Four Time.—Six-four Time ($\frac{6}{4}$) is formed by combining two measures of Three-four Time. Each measure consists of six Crotchets, or

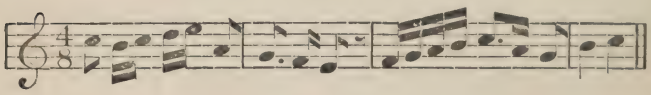
their equivalents. The strong accent falls on the first note, and the weak on the fourth.



73. Six-Eight Time.—Six-eight Time contains two *Three-eight* Measures. Each measure consists of six Quavers, or notes equivalent to them. The strong accent falls on the first note, and the weak on the fourth.



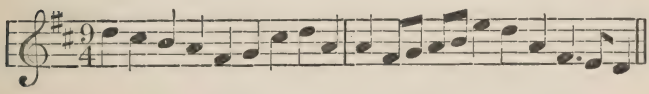
74. Four-Eight Time.—Four-eight Time consists of two *Two-eight* Measures; each of which contains four Quavers, or their equivalents.



75. COMPOUND TRIPLE TIME.—Compound Triple Time is that which is formed by the combination of three measures of Simple Duple Time, or three measures of Simple Triple Time.

76. The signatures of the various kinds of Compound Triple Time are:—$\frac{9}{4}$, $\frac{9}{8}$, $\frac{9}{16}$.

77. NINE-FOUR TIME.—Nine-four Time consists of three *Three-four* Measures. Each measure contains nine Crotchets, or notes equal to them in duration. The strong accent falls on the first note, and the weak on the second and third.



78. NINE-EIGHT TIME.—Nine-eight Time consists of three *Three-eight* Measures. Each measure consisting of nine Quavers, or notes equivalent to them.

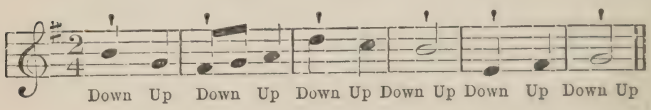
79. NINE-SIXTEEN TIME.—The Nine-sixteen Time contains three Three-sixteen Measures, and is only occasionally used.

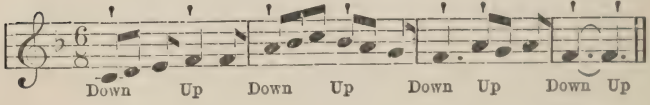
80. BEATING TIME.—In musical performances, when a number of persons have to sing or play together, it is necessary that all should keep the same time. To assist in this, it is usual to have the time indicated by a person called a Leader or *Conductor*, whose duty it is to conduct or beat the time by means of a stick called a *Baton*, each stroke of which is termed a Beat.

81. In every complete measure there are the same number of beats; these being of course regulated by the time signature. The first beat of a measure is the most important, and is generally a *down beat*.

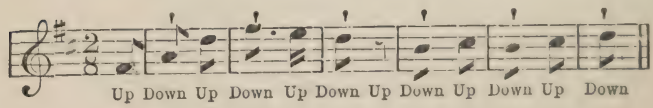
82. The number of beats required in the different kinds of measures is shewn in the following paragraphs:—

83. Two Beats in a measure in Simple Duple Measures, $\frac{2}{2}$, $\frac{2}{4}$, $\frac{2}{8}$; also in Compound Duple Measures, $\frac{4}{4}$, $\frac{6}{4}$, $\frac{6}{8}$, $\frac{4}{8}$, &c. In quick movements the beats being struck thus,—Down, up. If the first note be accented, the time is beaten thus,—



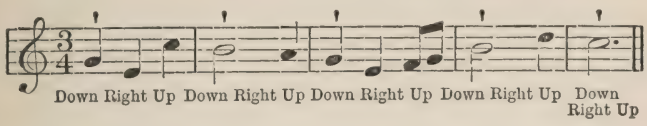


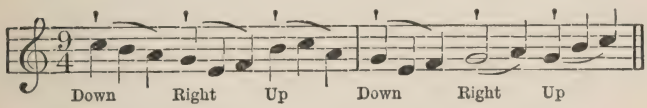
84. If the first note be unaccented, the time is beaten thus,—



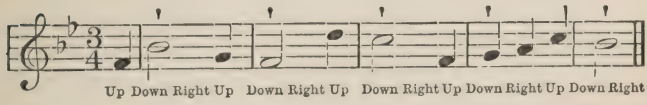
85. Three Beats in Simple Triple Measures, $\frac{3}{4}$, $\frac{3}{8}$, $\frac{3}{2}$; and in Compound Triple Measures, $\frac{9}{4}$, $\frac{9}{8}$, $\frac{9}{16}$, &c. In quick movements the beats being struck, —Down, right, up; or, Down, left, up.

EXAMPLES.—If the first note be accented, the time is beaten thus:—



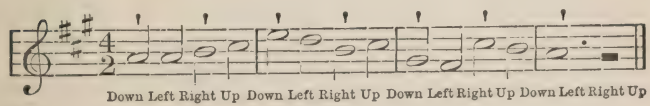


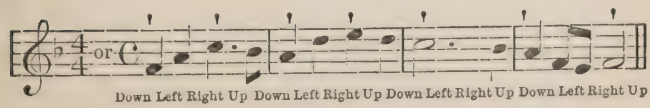
86. If the first note be unaccented, the time is beaten thus:—



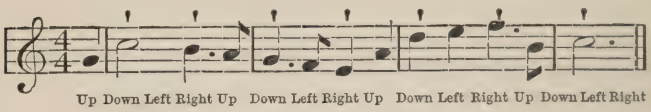
87. FOUR BEATS in a measure of $\frac{4}{2}$, $\frac{4}{4}$ or $\frac{4}{4}$, $\frac{4}{8}$, $\frac{12}{4}$, $\frac{12}{8}$, the beats being struck thus:—Down, left, right, up.

EXAMPLE.—If the first note be accented, the beats are struck thus:—



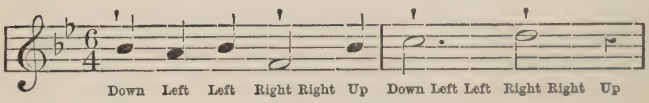


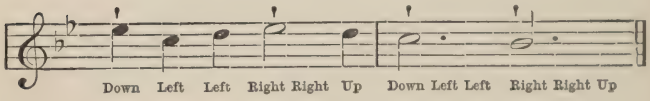
88. When the first note is unaccented, the beats are struck thus:—



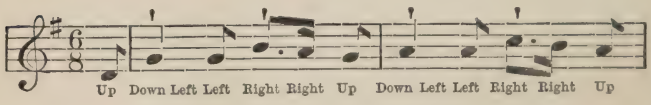
89. Six Beats in a measure of $\frac{6}{4}$, $\frac{6}{8}$, when the movement is slow.

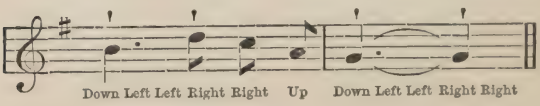
Examples.—If the first note be accented, the beats are struck thus:—Down, left, left, right, right, up.





If the first note be unaccented, the beats are struck thus:—





Exercise I.

1. Define Accent, Rhythm, Bar, and Measure.

2. What is Time? How many kinds are there?

3. What is the use of two perpendicular lines drawn across the Stave? What are they called?

4. What is a Time Signature?

5. Classify the following:—$\frac{9}{8}$, $\frac{9}{16}$, $\frac{2}{2}$, $\frac{4}{2}$, $\frac{12}{4}$, $\frac{3}{2}$, $\frac{2}{8}$, $\frac{4}{4}$, $\frac{9}{4}$, $\frac{6}{4}$, $\frac{6}{8}$.

6. Write eight measures in $\frac{6}{8}$, $\frac{4}{4}$, $\frac{3}{2}$ and $\frac{2}{2}$.

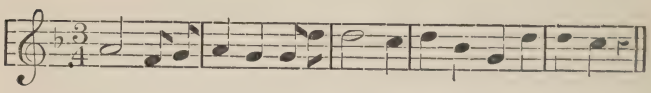
7. Explain fully $\frac{4}{4}$ and $\frac{3}{8}$, stating to what each figure refers.

Exercise II.

1. Define (1) the following:—Bar, Measure, Common Time, Triple Time, and their subdivision; (2) name the marks by which each time is distinguished; (3) and the note to which the time marks refer.

2. Write after each of the following Signatures a measure in the time indicated by it:—$\frac{6}{8}$, $\frac{9}{8}$, $\frac{3}{8}$, $\frac{4}{4}$, $\frac{4}{2}$.

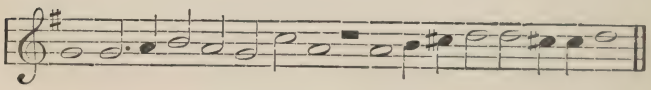
3. Write the annexed passage of music in $\frac{4}{8}$ time, prefixing the proper time signature.



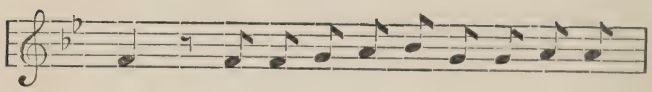
4. Write down eight measures, each consisting of six Quavers, or notes equivalent to them.

5. Divide the following passages into measures, each being of the value of one Semibreve:—

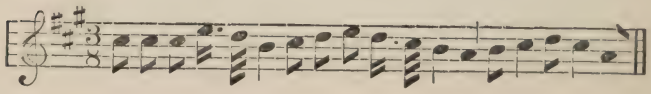
1.



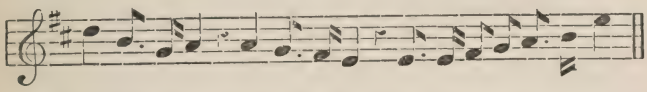
2.



6. Divide the following passage into measures of $\frac{3}{8}$ time:—



7. Distribute the following passage of music into measures of two different kinds:—



8. Shew, by examples, where the accent falls in Common Time, and in Triple Time.

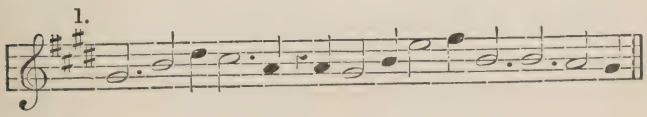
Exercise III.

1. Write three measures in the time indicated by the following:—$\frac{6}{8}$, $\frac{3}{4}$, $\frac{\text{C}}{\text{C}}$, $\frac{\text{C}}{\text{C}}$, $\frac{9}{8}$, $\frac{6}{8}$, and $\frac{6}{4}$.

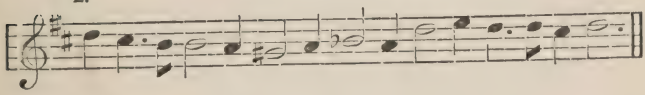
2. Write down eight measures, each consisting of nine Quavers, or notes equivalent to them.

3. Divide the following passages into measures of $\frac{3}{4}$ time, prefixing the proper signatures:—

1.



2.



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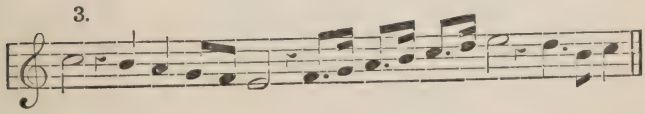
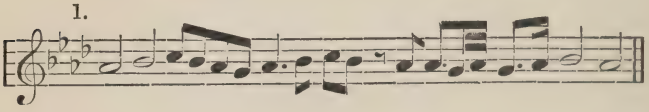


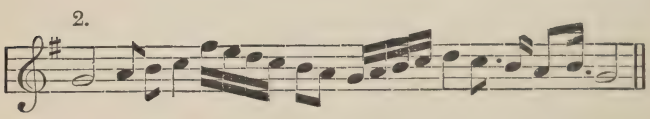
4. What is meant by Triple and Common Time? Give the signatures by which three different forms of Triple Time are indicated; and shew the *principal* on which those signatures are formed.

5. Distribute the following passages of music into measures of $\frac{4}{4}$ time prefixing the proper signature.

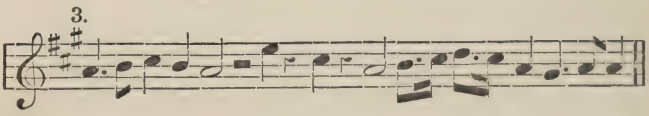
1.



2.

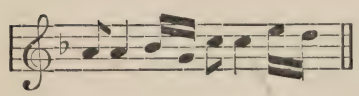


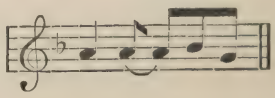
3.



6. Write a passage of music of six measures in $\frac{6}{8}$ time, varying the notes in each measure.

7. Give the time signatures of the following:—



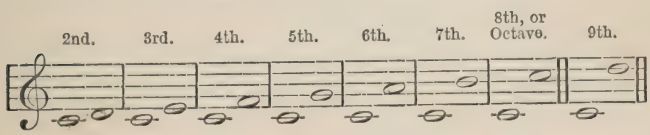


CHAPTER IV.

Intervals.

90. INTERVALS.—An Interval is the difference in pitch of any two sounds. Thus C-D, C-G, E-A, are Intervals, because, in each case, the two sounds are of *different pitch.*

91. An Interval is always reckoned upwards, (unless otherwise specified,) by the number of degrees it occupies on the Staff. Thus C-D occupy *two* degrees, therefore they form an interval of a *second;* C-E is a *third;* C to F is a *fourth;* and so on.



92. SIMPLE INTERVALS.—Simple Intervals are those which are contained within the compass of an octave. To this class belong the 2nd, 3rd, &c.

93. COMPOUND INTERVALS.—Compound Intervals are those which exceed the compass of the octave,—*e. g.*, the 9th, 10th, &c.

94. Compound Intervals may be converted into Simple Intervals by deducting the number seven.

For example, the 9th is a compound second; a 10th is a compound third, &c.

95. PRINCIPAL AND ACCESSORY NAMES.—The names 2nd, 3rd, 4th, 5th, 6th, 7th, and 8th, are termed PRINCIPAL names; but these cannot adequately denote, with exactness, the *nature* or *extent* of an interval. Thus C-D, C to D♯, C to D♭, are all termed *seconds;* but they each differ from the rest in extent, therefore it is evident that other names must be employed to indicate the kind of 2nd. ACCESSORY NAMES are used for this purpose.

96. The Accessory Names are Major, Minor, Imperfect or Diminished, and Augmented.

97. MAJOR AND MINOR INTERVALS.—In the series of sounds of the natural scale there are two kinds of intervals,—a larger, called MAJOR, and a smaller, called MINOR.

98. MAJOR INTERVALS.—Major is applied to 2nds, 3rds, 6ths, and 7ths. In all Major diatonic scales the intervals counted from the tonic are either Major or Perfect. For example, in the scale of C, the interval from C to D is a major second; C-E, a major third; C to A, a major sixth; C-B, a major seventh; C to C, a perfect octave, (or unison;) C to F, a perfect fourth; and C to G, a perfect fifth.

99. MINOR INTERVALS.—A Minor interval contains one semitone *less* than a Major interval. Minor is applied to 2nds, 3rds, 6ths, and 7ths. Thus,

E to F is a minor second; C to E♭ is a minor third; C to A♭ is a minor sixth; and D to C, G to F, are Minor sevenths.

100. PERFECT INTERVALS.—The Perfect intervals are the 8th, (octave,) the 5th, and the 4th.

101. IMPERFECT AND DIMINISHED INTERVALS.—Imperfect is applied to 4ths and 5ths, when the interval is one semitone less than the Perfect of the same name. Thus, C to G is a perfect fifth; but B to F is an *imperfect* fifth, because it contains one semitone less than the perfect fifth.

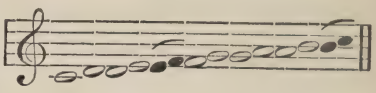
A DIMINISHED INTERVAL is one semitone *less* than the MINOR of the same name. A Minor interval may be diminished by raising the pitch of its *lower* sound a semitone, or lowering the pitch of its *upper* sound a semitone. Thus, D to F is a Minor third; therefore, D to F♭, D♯ to F, are diminished thirds. A to F is a minor sixth; but A♯ to F, A to F♭, are diminished sixths.

102. AUGMENTED INTERVALS.—An augmented interval is one semitone *larger* than the *Major* of the same name. An interval may be augmented by raising the pitch of the *upper* sound a semitone, or by lowering the pitch of the lower sound a semitone. Thus, C to E, D to F♯, E to G♯, being major thirds, C to E♯ or C♭ to E, D to F𝄪 or D♭ to F♯, E to G𝄪 or E♭ to G♯, are *augmented thirds*.

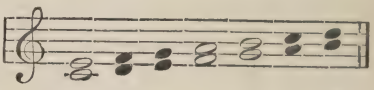
103. The following table shews the intervals which

are found in the scale of C, together with the number of tones and semitones in each.

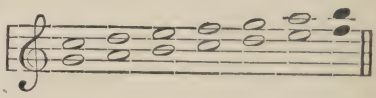
SECONDS.—*Five major seconds* or tones. *Two minor seconds* or semitones.



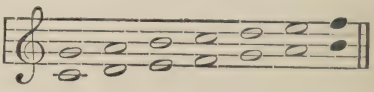
THIRDS.—*Three major thirds*, each containing two tones. *Four minor thirds*, each of one tone and one semitone.



FOURTHS.—*Six perfect fourths*, each containing two tones and one semitone. *One tritone fourth* of three tones.



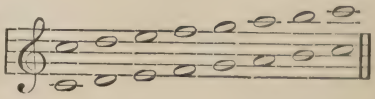
FIFTHS.—*Six perfect fifths*, each of three tones and one semitone. *One imperfect fifth* of two tones and two semitones.



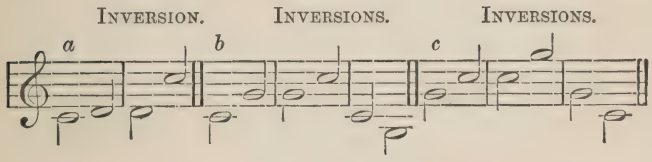
SIXTHS.—*Four major sixths*, each containing four tones and one semitone. *Three minor sixths*, each of three tones and two semitones.

SEVENTHS.—*Two major sevenths*, each containing five tones and one semitone. *Five minor sevenths*, each containing four tones and two semitones.

OCTAVES.—*Seven octaves*, (8ths,) all perfect, each containing five tones and two semitones.



104. INVERSION OF INTERVALS.—By the inversion of an interval is meant the placing the *lowest* of the two sounds which form it an octave higher, or the *highest* sound an octave lower.



By inversion seconds become sevenths; thirds become sixths; fourths become fifths; fifths become fourths; sixths become thirds, &c.; and *vice versâ.*

105. By deducting the number of degrees in an interval from nine, the remainder will be the number of degrees in the inversion,—*e. g.*, A to E is a fifth; 9 - 5=4,—the inverted interval is therefore a fourth.

106. By inversion MAJOR INTERVALS become MINOR INTERVALS.
" MINOR INTERVALS become MAJOR INTERVALS.
" DIMINISHED INTERVALS become AUGMENTED INTERVALS.
" AUGMENTED INTERVALS become DIMINISHED INTERVALS.

Note.—By inversion Perfect Intervals form Perfect Intervals.

Exercise I.

1. Define an Interval, and state how they are reckoned.

2. Give examples of Simple and Compound Intervals.

3. Mention the various names which are applied to intervals, and say why they are so applied.

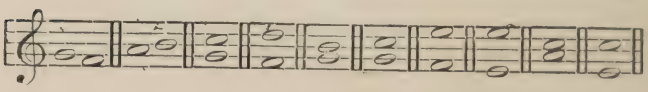
4. Give the contents, (tones and semitones,) of the interval from the first to the second sound of the natural scale, from the first to the third, first to fourth, first to fifth, first to sixth, first to seventh, and first to the eighth sound. State the name of each interval.

5. What are the Principal and Accessory names? Explain why the latter are used.

6. Give examples of Major, Minor, and Augmented Intervals.

Exercise II.

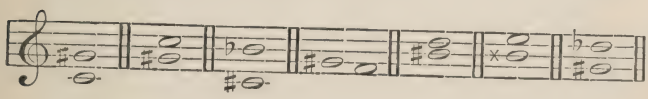
1. Write over each of the following pairs of notes the name of the interval it forms:—



2. Explain what is meant by Augmented and Diminished Intervals, and state how an interval may be augmented or diminished.

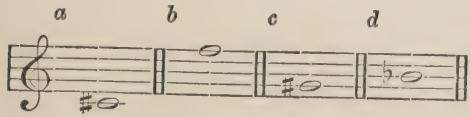
3. On the Treble Staff write the following intervals:—perfect fourth; major sixth; minor third; major second; major third; perfect fifth; minor second; and octave.

4. Write under each of the following pairs of notes the quality of the interval it forms:—



5. Give the contents (tones and semitones) of a perfect fourth; minor sixth; major third; perfect fifth; tritone fourth; and octave.

6. Add to *a* its augmented second below, to *b* its diminished fourth below, to *c* its diminished seventh above, and to *d* its augmented fifth above.



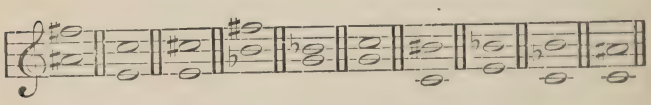
7. Write down the different intervals exhibited in the major and minor scales, giving the proper name of the interval to each.

Exercise III.

1. On the Treble Staff write the following intervals: —major third; tritone fourth; perfect fourth; minor seventh; major sixth; major seventh; perfect fifth; major second; and imperfect fifth.

2. Write the minor sixths, augmented thirds, imperfect fifths, and minor sevenths, to A♭, E♭, B, D, D♭, F♯.

3. Over each of the following intervals write its name, with the number of tones and semitones in each:—



4. What is meant by the inversion of an interval? What do the seconds, thirds, fourths, fifths, sixths, and sevenths become when inverted?

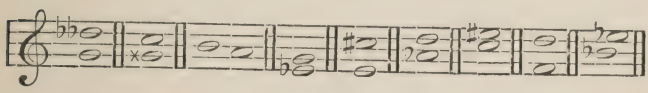
5. What do major intervals become when inverted? Give a few examples.

6. What do minor, augmented, and diminished intervals become when inverted? What are the inversions of a perfect fourth, minor third, imperfect fifth, major seventh, augmented fifth, augmented sixth, and major third?

Exercise IV.

1. Define the following:—interval, tone, semitone; and state how they are distinguished.

2. Write under each of the following intervals the name and quality of each:—

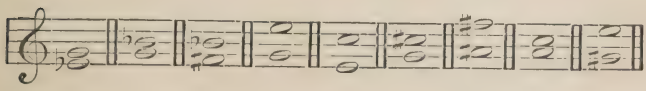


3. Write the perfect fifths, minor thirds, and major thirds to C, C♯, B, B♭.

4. How many semitones are there in a major third, perfect fifth, diminished seventh, augmented fifth, major sixth, augmented ninth, and minor third?

5. Write the intervals mentioned in the fourth question on the Bass Staff.

6. Write the inversions of the following intervals, and the number of semitones each interval contains:—



7. Give the major third to F♯, E, C♯, B♭, F; also the minor third to C, D, F, C♭, and G.

CHAPTER V.

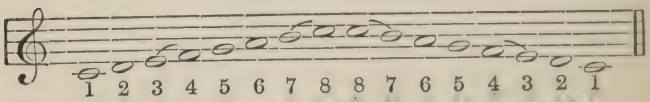
Scales.

107. SCALE.—A Scale is a regular succession of sounds, ascending and descending by degrees from any note to its octave. The word scale is derived from Latin *scala, a ladder*. The scale is a kind of ladder on which the sounds are placed.

108. There are two kinds of scales in modern use, —viz., Diatonic and Chromatic.

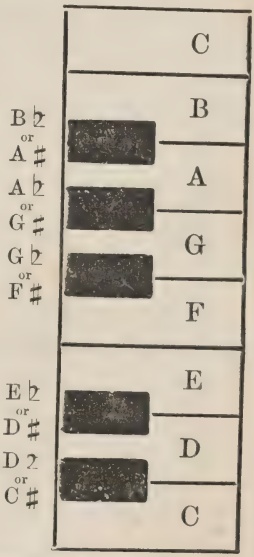
109. DIATONIC SCALES.—There are two kinds of Diatonic Scales,—viz., Major Diatonic and Minor Diatonic.

110. MAJOR DIATONIC SCALE.—The Major Diatonic Scale is so called because the semitones (par. 26) fall between the 3rd and 4th, and 7th and 8th sounds, both in ascending and descending.



111. To the eye the intervals in the above scale appear to be alike; but to the ear they are *not* so, for the intervals between the 3rd and 4th sounds (E and F), and between the 7th and 8th sounds (B and C), are *semitones*, the other intervals being *tones*.

112. This will be more apparent from the accompanying diagram of the keyboard of a pianoforte. The white keys are called *Naturals*, and represent the natural or unchanged notes. The black keys are called *Sharps* and *Flats*, and represent notes which are either raised or lowered a semitone. Thus the black note to the right of C is called C♯, to the right of G, G♯, and so on. Again, the note on the left of B is called B♭, that on the left of E is called E♭, and so on. It will be seen that there is no intermediate note between E and F, and likewise between B and C. Therefore they are a *semitone* apart.

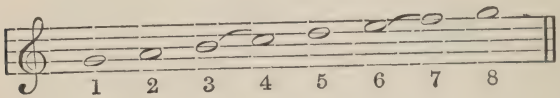


113. NATURAL SCALE.—The scale in par. 110 is called the NATURAL SCALE, because it can be written without the aid of sharps and flats, and it can be played entirely on the white keys of the piano.

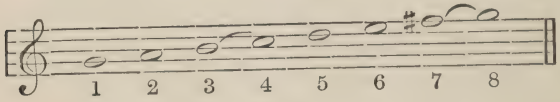
114. KEY-NOTE.—The note on which a scale begins is called the KEY-NOTE.

115. MAJOR MODE.—The mode of constructing major scales is called the MAJOR MODE, and includes all the major scales. A scale may be formed on any note, C, D, E, &c. For example, the first note of a new scale may commence on the second line of the

Staff G, but the true relation of the tones and semitones is not preserved, for the semitones fall between the 3rd and 4th, and 6th and 7th; and according to par. 110 they should fall between the 3rd and 4th, and the 7th and 8th.



To rémedy this defect, the 7th sound F is raised a semitone by means of a sharp ♯. This is the MAJOR SCALE of G.



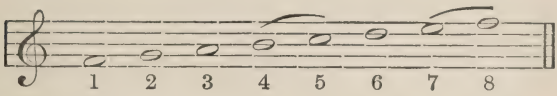
116. It may be asked, Why may not G♭ be used instead of F♯, seeing that both these names denote the *same* sound? Either will do as far as the effect is concerned; but by taking G♭ we get *two* G's in the scale, F being missing,—*e. g.*,

G, A, B, C, D, E, G♭, G.

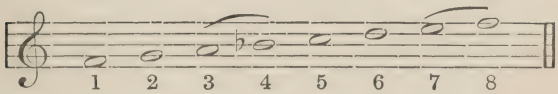
Therefore, in forming the various scales, it is necessary to use no name more than *once*.

117. MAJOR SCALE OF D, &c.—A scale may be formed on D by introducing a second sharp; and by introducing a third sharp a scale would be formed on A, and so on with all the scales with sharps.

118. Again, by taking F as the key-note of a new scale, the semitones fall between the 4th and 5th, and the 7th and 8th sounds, instead of the 3rd and 4th, and the 7th and 8th.

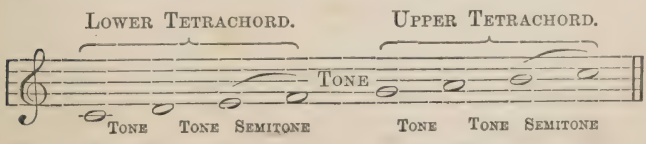


The distance between the 4th and 5th sounds (B and C) is too great; therefore, in accordance with par. 110, the note B is *lowered* a semitone by means of a flat. This makes the semitones fall in correct order, and forms the Major Scale of F.



119. Similarly, by introducing a second flat the Major Scale of B is formed; and by introducing a third flat the Major Scale of E♭; and so on.

120. DERIVATION OF SCALES.—The Major Diatonic Scale consists of two equal parts, each separated by a *tone*. Each of the parts is called a TETRACHORD, and consists of four sounds, the tones and semitones falling thus:—tone, tone, semitone.



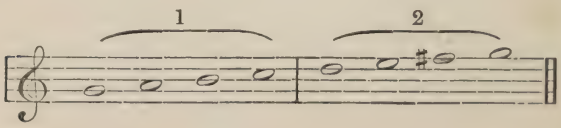
121. By comparing the above Tetrachords, we find

that the 4th sound bears the same relation to the first three sounds of the lower Tetrachord that the 8th bears to the 5th, 6th, and 7th sounds; and that the 1st sound has the same relation to the 2nd, 3rd, and 4th sounds, that the 5th has to the 6th, 7th, and 8th sounds.

1	2	3	4
C Tone.	D Tone.	E Semitone.	F
G Tone.	A Tone.	B Semitone.	C
5	6	7	8

122. We learn from these facts that the fourth and fifth sounds are similar in effect to the first sound; consequently they are the most important sounds of the scale, with the exception of the first sound. It has been found that a scale which commences on the fourth or fifth sound of another scale, is nearly related to the latter, and consequently it is that which most naturally succeeds it. This is exemplied in the following paragraph.

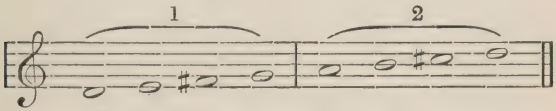
123. MAJOR SCALE OF G.—If the *upper* Tetrachord of the Scale of C be taken to form the *lower* Tetrachord of a new scale, and an *upper* Tetrachord be added to complete the series, a scale is formed similar to that of C, and is called the MAJOR SCALE of G.



124. A *new* sound is introduced into the above

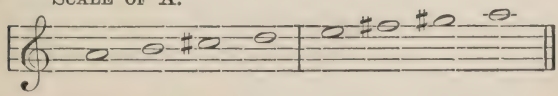
scale because the notes D, E, F, G, do not form a proper Tetrachord, the tones and semitones falling thus:—*tone, semitone, tone;* instead of *tone, tone, semitone.* Therefore, to remedy this defect, the note F is raised a semitone by means of a sharp ♯. It may be here remarked, that the new note which is raised a semitone is always the seventh of the *new* scale, or the *fourth* of the original scale.

125. MAJOR SCALE OF D.—Again, by taking the upper Tetrachord of the Scale of G to form the lower Tetrachord of a new scale, and adding an upper Tetrachord, (the 7th note being raised a semitone to make the notes A, B, C, D, a proper Tetrachord,) the Scale of D is obtained.

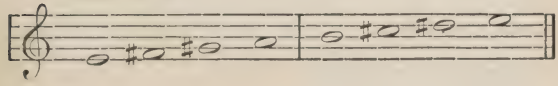


126. MAJOR SCALES OF A, E, B, F♯, C♯.—By continuing the process, the following scales are obtained:—

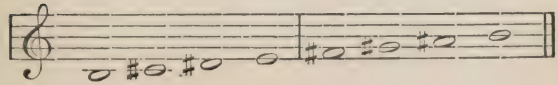
SCALE OF A.



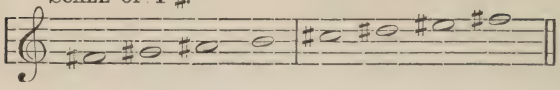
SCALE OF E.



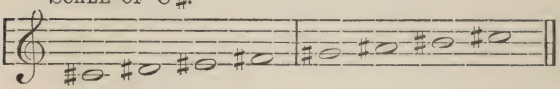
SCALE OF B.



SCALE OF F♯.

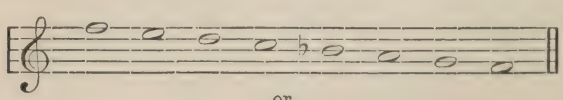


SCALE OF C♯.

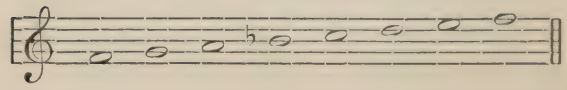


127. MAJOR SCALES, WITH FLATS.—It has been shewn that the Major Scale of G was derived from that of C, and that the upper Tetrachord of the latter scale forms the lower Tetrachord of that of G; and also that the Scale of D was derived from the Scale of G, and so on.

128. MAJOR SCALE OF F.—A scale with a flat may be formed by taking the *lower* Tetrachord of the Scale of C, in descending order,—viz., F, E, D, C, to form the *upper* Tetrachord of the new scale, and adding a second Tetrachord to complete the series. We find that the notes B, A, G, F, do not, without alteration, form a proper Tetrachord; and also that the two Tetrachords are joined by a semitone instead of a *tone*. Therefore, in order to form a proper Tetrachord, and to separate the two Tetrachords by a tone, we lower the note B a semitone, by means of a flat, (see par. 116,) thus forming a perfect scale. This is the MAJOR SCALE of F.

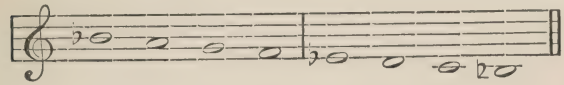


or

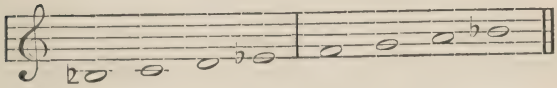


129. In the formation of scales with flats, the new note, which requires to be flattened a semitone, is always the 7th of the original scale, or the 4th of the new scale.

130. MAJOR SCALE OF B♭.—Again, by taking the *lower* Tetrachord (in descending order) of the above scale to form the *upper* Tetrachord of a new scale, and adding a proper Tetrachord to complete the series, we obtain the Scale of B♭.

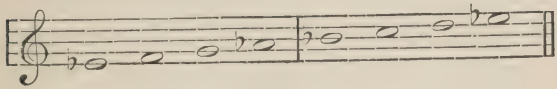


or

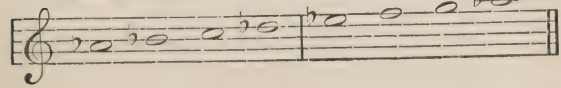


131. MAJOR SCALES OF E♭, A♭, D♭, G♭, C♭.—By continuing the process we obtain the following scales:—

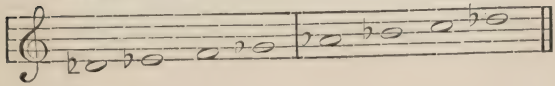
SCALE OF E♭.



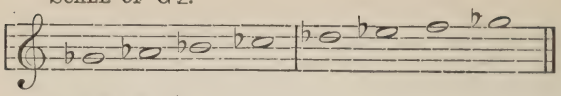
SCALE OF A♭.



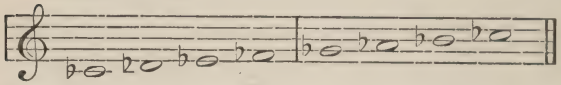
SCALE OF D♭.



SCALE OF G♭.

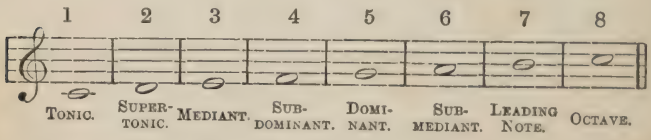


SCALE OF C♭.



132. RELATIVE MAJOR SCALES.—Scales which have the greatest number of notes in common are said to be related to each other. For instance, the Scales of G and F differ from the Scale of C in only one note, and for that reason they are related to each other. The scales related to E♭ major are A♭ and B♭, &c.

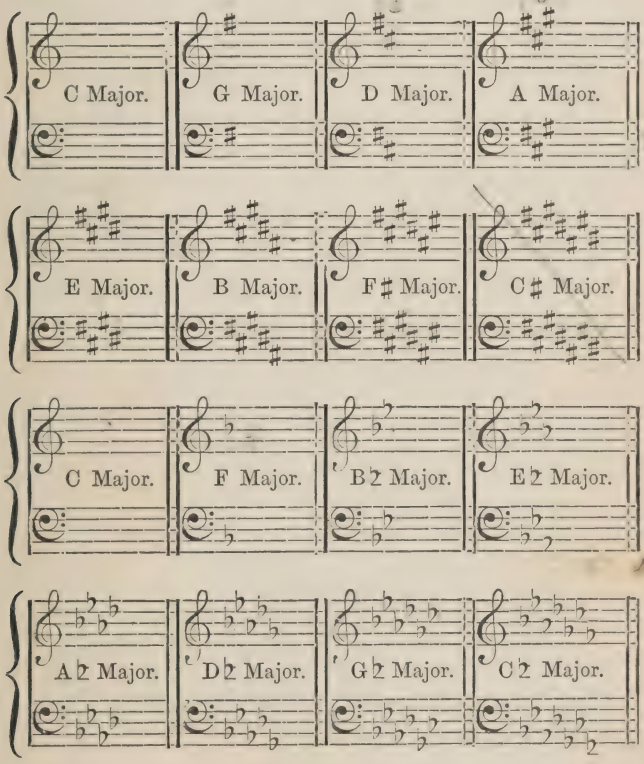
133. TECHNICAL NAMES OF THE NOTES OF THE SCALE.—The first note of the scale is called the KEY-NOTE or TONIC; the second, the SUPER-TONIC; the third, the MEDIANT, being midway between the Tonic and Dominant; the fourth, the SUB-DOMINANT, being under the Dominant; the fifth, the DOMINANT; the sixth, the SUB-MEDIANT; the seventh, the SUB-TONIC or LEADING NOTE, because it *leads* into the Tonic.



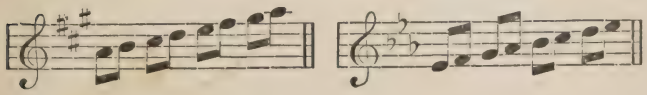
134. KEY SIGNATURES.—The Sharps and Flats necessary to the key or scale are usually placed, for convenience, at the commencement of the Staff, immediately after the Clef, in the order of their

development. When so placed they are called KEY SIGNATURES.

135. TABLE OF KEY SIGNATURES:—



136. The scales of A and E♭ Major, when the signatures are used, appear thus:—

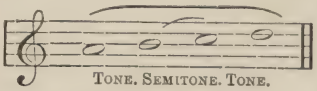


137. In Major Scales with Sharps, the key-note is always a semitone above the last Sharp in the signature. In Major Scales with Flats, the key-note is the last Flat but one in the signature, or four degrees lower than the last Flat.

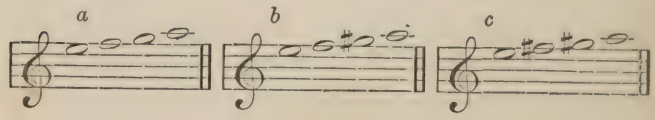
138. The key of C♯ has seven Sharps in its scale, and the key of D♭ has only five Flats; but if they are played on the piano, they are practically the same. Therefore, for convenience, the latter key is frequently put in the place of the former key, thus changing the notation, but *not* the pitch. Such a change is termed an ENHARMONIC CHANGE.

139. MINOR DIATONIC SCALES.—Minor Diatonic Scales are so called because the interval of the 3rd from the Tonic is *Minor.*

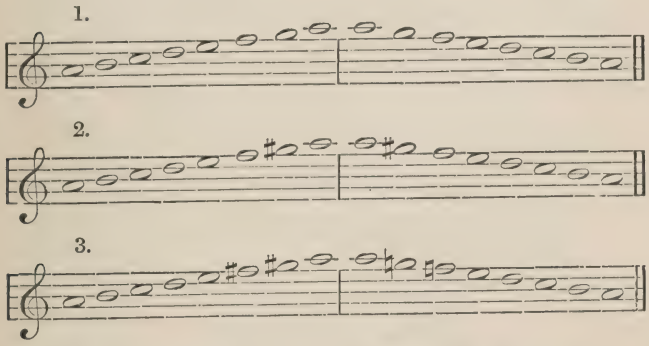
140. FORMS OF THE MINOR SCALE.—There are various modes of forming the Minor Scale, the lower Tetrachord in all cases being alike in formation.



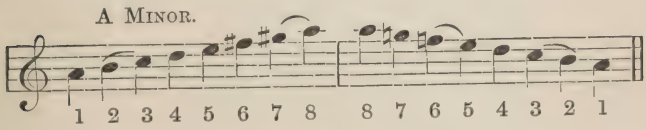
141. The upper Tetrachord of the Minor Scale is formed in various ways. In the second example (*b*), the 7th is raised a semitone to form a leading note; in the third example (*c*), the 6th is raised a semitone to get rid of the augmented 2nd which separates the two notes.



142. The following examples shew the complete Minor Scale in its various forms. No. 1 is the ancient form; No. 2, the true form; and No. 3, the commonly assumed form:—



143. POSITION OF SEMITONES.—In the commonly assumed form, the semitones occur between the 2nd and 3rd and 7th and 8th sounds in ascending; but in descending they fall in different order. It is argued that a *leading note* is not required when coming *down*, so G♯ is altered to G♮, and the next note F is made F♮. This alteration gives a more definite impression of the *Minor* mode.



144. RELATIVE MINOR AND MAJOR SCALES.—Major and minor scales which have the same key signatures are called *Relative Keys*. For instance, the Scales of A Minor and C Major are

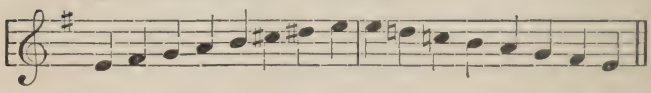
denoted on the Staff by the same signature, therefore they are said to be *related.* The Scale of A Minor is the *relative minor* to the Scale of C Major; and the Scale of C Major is the *relative major* to the Scale of A Minor. The relative minor scale of any major scale is always a minor third *below* the relative major scale, and the relative major scale is always a minor third *above* the relative minor scale.

145. MINOR SCALES WITH SHARPS.—We have seen that the Scale of A Minor is the relative minor to the Scale of C Major. Similarly, every major scale has its relative minor. The following are the major scales with sharps, and their relative minor scales:—

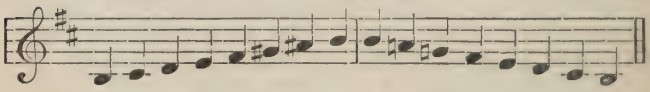
C Major	is related to	A Minor.	E Major	is related to	C♯ Minor.
G Major	,,	E Minor.	B Major	,,	G♯ Minor.
D Major	,,	B Minor.	F♯ Major	,,	D♯ Minor.
A Major	,,	F♯ Minor.	C♯ Major	,,	A♯ Minor.

146. The following are the complete minor scales with sharps:—

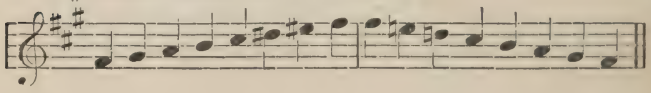
E MINOR RELATIVE TO G MAJOR.



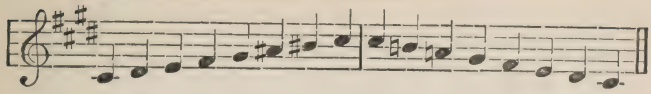
B MINOR RELATIVE TO D MAJOR.



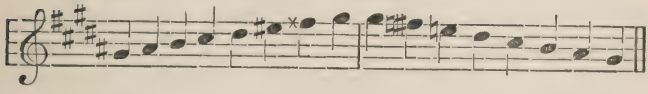
F♯ MINOR RELATIVE TO A MAJOR.



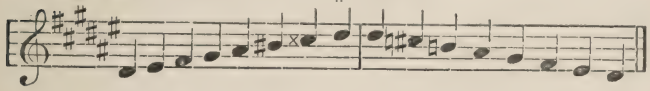
C♯ Minor relative to E Major.



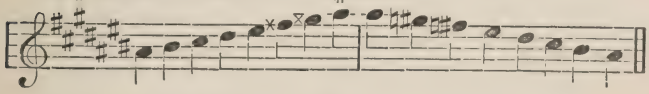
G♯ Minor relative to B Major.



D♯ Minor relative to F♯ Major.



A♯ Minor relative to C♯ Major.

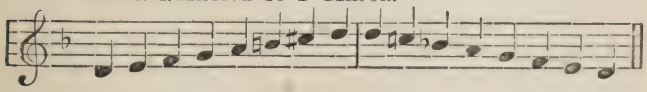


147. MINOR SCALES WITH FLATS.—The following are the major scales with flats, with their relative minor scales:—

F Major	is related to	D Minor.	D♭ Major	is related to	B♭ Minor.
B♭ Major	,,	G Minor.	G♭ Major	,,	E♭ Minor.
E♭ Major	,,	C Minor.	C♭ Major	,,	A♭ Minor.
A♭ Major	,,	F Minor.			

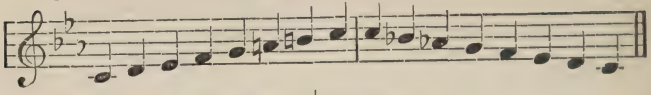
148. The following are the complete minor scales with flats:—

D Minor relative to F Major.

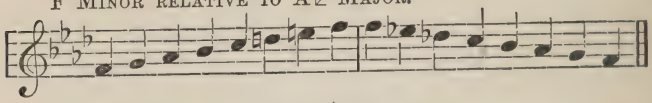


G Minor relative to B♭ Major.

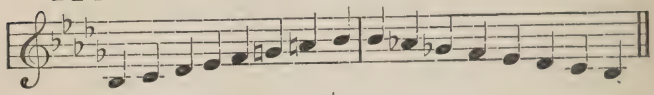
C Minor relative to E♭ Major.



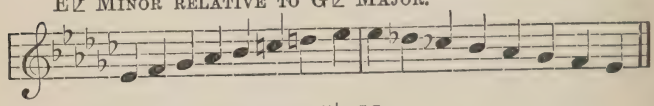
F Minor relative to A♭ Major.



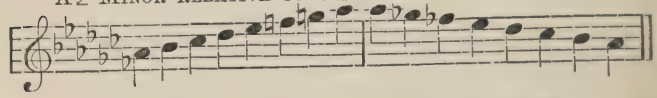
B♭ Minor relative to D♭ Major.



E♭ Minor relative to G♭ Major.

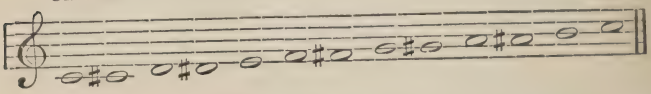


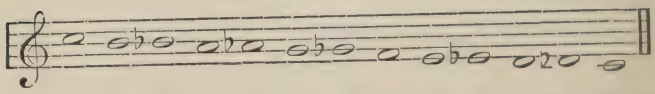
A♭ Minor relative to C♭ Major.



149. CHROMATIC SCALES.—A Chromatic Scale is so called because it is composed of semitones only, and also because the chromatic signs must be used if it be placed on the Staff.

Chromatic Scale of C.



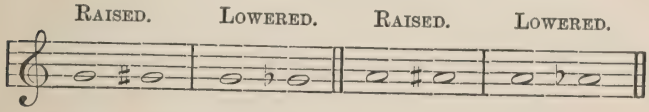


150. Sharps are usually used when ascending, flats in descending, because a smaller number of accidentals is required than would be the case if sharps were

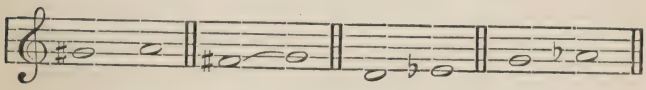
used in descending, and flats in ascending. This fact can be easily verified.

151. In the Chromatic Scale two kinds of semitones are found,—viz., Chromatic Semitones and Diatonic Semitones.

152. A Chromatic Semitone is found between any given note and that same note *raised* by a sharp, or lowered by a flat.

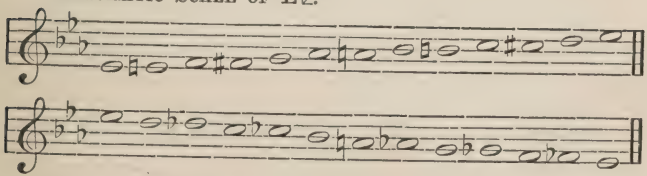


153. A Diatonic Semitone is found between any note and the sharp of the note *below*, or the flat of the note *above*.

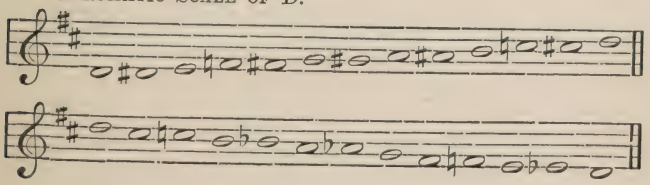


154. EXAMPLES:—

CHROMATIC SCALE OF E♭.



CHROMATIC SCALE OF D.



Exercise I.

1. Define Scale. How many kinds of scales are there?

2. Where do the semitones fall in the Major Diatonic Scale?

3. The intervals in the Scale of C *appear* to be alike, but are not so. Prove this.

4. On the Treble Staff write the natural scale ascending and descending, and mark the position of the semitones.

5. In forming the Scale of G, why may not G♭ be used instead of F♯, seeing that both of these names denote the same sound?

6. What is meant by the terms Key-note and Major Mode?

Exercise II.

1. Write down the Major Diatonic Scale in two positions on the Treble Staff. Write the same on the Bass Staff. Put the names of the notes, with the proper sharps and flats, when required, before each.

2. What is a Tetrachord? Write the Scale of C on the Treble Staff, and mark the upper and lower Tetrachord, and shew how the tones and semitones fall.

3. Shew how the Major Scale of G is formed from the Scale of C.

4. Write down the Major Scales of G, A, D, and E, putting sharps before the notes requiring them.

5. Explain the succession of sharp keys, and shew how they are derived one from the other.

6. How many sharps are required in the Scale of C♯? Name them.

Exercise III.

1. Shew that the Scale of B♭ is derived from the Scale of F.

2. On the Treble Staff write the Major Scale of E♭, putting flats before the notes requiring them.

3. Write on the Bass Staff the Scales of A, F, G, E, A♭, G♭.

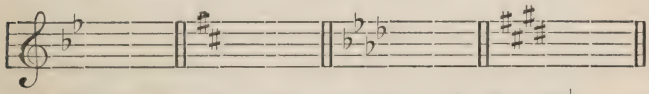
4. To what notes of the scale are the following terms applied:—Leading Note, Dominant, Octave, Tonic, Mediant, Sub-dominant, Sub-mediant?

5. What is a Key Signature? Why are they used?

6. On the Treble Staff write down the signatures of the Scales of G, A, A♭, B♭, B, and G♭.

Exercise IV.

1. Write after each of the following the tonic of the major scale of which it is the signature:—



2. Write the signatures of G, C♯, F♯, D♭, and C♭, major.

3. What is an Enharmonic Change? Give an illustration.

4. On the Bass Staff write the Scales of E♭ and E, prefixing the proper signature.

5. Explain the succession of flat keys, and shew how they are derived from each other.

6. Give examples of relative major scales.

Exercise V.

1. How many kinds of Diatonic Scales are there? Where do the semitones fall in each?

2. Write the minor diatonic scale in three ways; the upper Tetrachord being in each case different.

3. What is meant by the relative minor of a major key? How is the one related to the other?

4. Give the relative minor scales of the following major scales:—E♭, C♯, F, B, D, C, A, and E.

5. Give the relative major scales of the following minor scales:—G, F, E♭, A♭, B♭, C, and D.

6. Write down the minor scales of G and F, ascending and descending, putting the proper signatures before them.

7. Name the characteristics of the two modes of the Diatonic Scale, how each is formed, and wherein they differ.

Exercise VI.

1. What is a Chromatic Scale? How many kinds of semitones are found in the Chromatic Scale? Give a few examples of each.

2. Write the Chromatic Minor Scale of B ascending, and mark the places of the augmented second, and of the semitones.

3. Give the proper signatures to pieces of music written respectively in the keys of C minor, A major, E major, E♭ major, G minor, E minor, and C♯ major.

4. Give the relative Minor to the Major keys of F, G, A, C, D; and write out the ascending and descending Minor scales of A, B, C.

5. How many modes are there of the Diatonic Scale? Draw and explain each of them respectively.

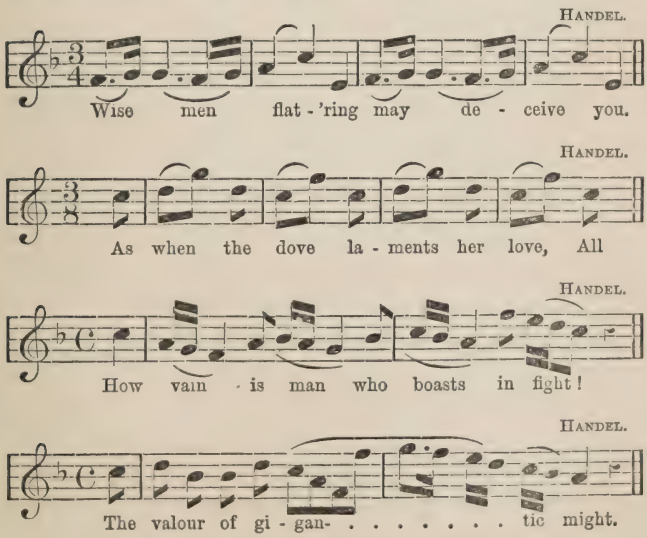
6. Write the Major scales of B♭, E♭, A♭, E, A, B, and D, placing the necessary sharps and flats before the proper notes.

CHAPTER VI.

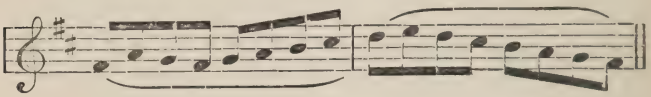
Ties—Slurs—Syncopation—Emphasis.

155. TIE OR BIND.—A Tie or Bind placed over two or more notes standing on the *same* line or space, shews that they are to be sung or played as one continuous note.

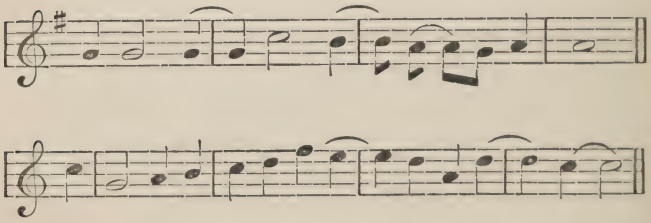
156. SLURS.—A Slur is frequently drawn over or under two or more notes, and indicates that the notes are to be sung to *one* syllable.



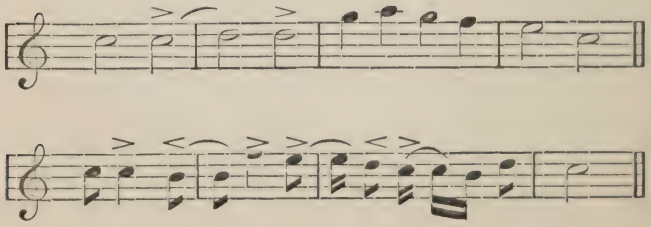
157. A slur is frequently drawn over or under notes, to indicate that they are to be played steadily and smoothly. The word *Legato* is used for the same purpose.



158. SYNCOPATION.—Syncopation is an unequal division of time; accented notes occurring in the unaccented part of a measure. The last note of one measure is connected in such a manner with the first note of the next measure, so as to form one sound.



159. EMPHASIS.—When the accent is transferred to a part of a measure which is ordinarily unaccented, a sign called an EMPHASIS is used, and is marked thus:—∨, or ∧, or >, or <.



Exercise I.

1. What is a Tie or Bind? Give a few examples.
2. What is a Slur? Give an example.
3. When a Slur is drawn over or under notes what does it indicate? Write an example.
4. What is the meaning of the word Legato?
5. Give a definition of Syncopation. Write an example.
6. What is Emphasis?

Exercise II.

1. What does a tie mean when placed over two or more notes standing on the same line or space?
2. When a slur is placed over two notes what does it indicate?
3. Does syncopation displace the usual accent?
4. Are there any signs to indicate emphasis?
5. How are notes to be played when a slur is drawn over them?
6. Give an example of emphasis.

CHAPTER VII.

Keys—Modulation—Transition.

160. Musical Composition may consist of the sounds of *one* or *more* scales. If a composition were confined exclusively to one scale it would soon become monotonous; therefore, for the sake of variety, it may move from the key in which it commences, and pass into another, from which it may return to the original key.

161. PRINCIPAL KEY.—Every distinct musical composition generally commences and ends in the *same* key, which is called the Key of the Tonic, or Principal Key.

162. SUBORDINATE KEY.—The key into which the Principal Key passes is termed the Secondary or Subordinate Key.

163. The Signature of the Principal Key is placed at the commencement of the staff, (par. 134,) but the Secondary Key is indicated by the accidentals which are placed before the notes requiring them.

164. Minor Scales have no key signature of their own, for, as before-mentioned, the major and minor scales, which are most nearly related, have the *same* signatures, (par. 144.)

165. METHOD OF ASCERTAINING A KEY. —The signature at the beginning of a composition indicates that it is in either a certain major key, or its relative minor; but which of them is determined other ways, *e. g.*:—

1. If the composition is in F Major, the *last note* of the bass will be on F; if it is in D Minor, the last bass note will be on D. The key signature in both these cases would be one flat, (B.) Again, if the last bass note be on A, the key will be A Major, and so on.

2. The accidentals used throughout a piece will indicate the minor key. The sixth and seventh sounds in minor scales are each raised a semitone, (par. 141;) therefore, if the *seventh* sound is frequently raised we may conclude that the key is minor.

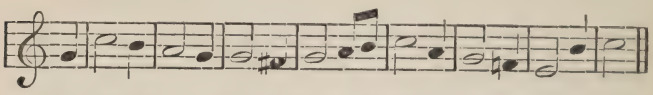
3. The scale indicated by the signature is one degree higher than the last sharp, or four degrees lower than the last flat. Thus, if the signature contains three sharps we can easily ascertain the key. The sharps are F, C, G, and a semitone above G♯ is A; therefore the piece is in A; and so on with other signatures in sharps. Again, suppose the signature of a certain piece contains three flats—B, E, A—four degrees lower than the last flat A, is E♭; therefore E♭ is the key, and so on.

166. MODULATION.—Modulation is the moving from one key to another.

167. KEY OF THE DOMINANT.—We have already seen that the scale formed on the fifth note (called the *Dominant*, par. 133) of the natural contains only one point of difference,—viz., the introduction of a new sharp note. This is one of the most usual and simplest kind of modulation, and is called the modulation into the key of the Dominant, because it changes from the principal key to that of the Dominant.

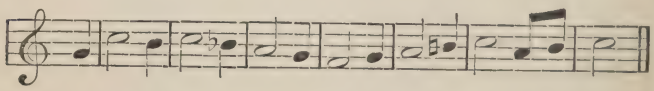
168. For example, the principal key of the following example is C, but the introduction of the sharp ♯

before the fourth sound of the principal key indicates that a modulation has taken place into the key of G; and the natural shews that the passage has returned to the principal key:—



169. KEY OF THE SUB-DOMINANT.—The scale formed on the fourth note (called Sub-Dominant) of the natural scale differs only in one point from that scale,—viz., the introduction of a new flat note, (par. 128;) therefore a change from the principal key to the key of the Sub-Dominant is called modulation into the key of the Sub-Dominant.

170. For example, the principal key of the following example is C, but the introduction of the flat ♭ before the seventh sound of the principal key denotes that the passage has modulated into the key of F; while the natural shews that the passage has returned to the principal key:—



171. KEY OF THE RELATIVE MINOR.—Every major key may modulate into its relative minor key. As seen in the preceding paragraphs, the scale of C can modulate into the dominant and sub-dominant keys; but in addition to these, it may change into its relative minor,—the key of A minor; and so with the other scales.

172. The full treatment of modulations pertains to the subject of *Harmony*.

173. TRANSITION.—Transition is the rapid passing through any key without remaining long enough to become a modulation.

174. PASSING NOTES.—Passing Notes are those which are introduced into a composition to give it effect,—no modulation taking place.

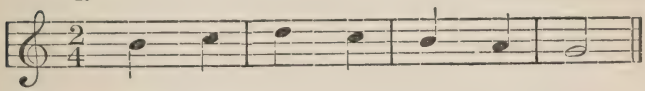
Exercise I.

1. What is the advantage of using the sounds of more than one scale in musical compositions?

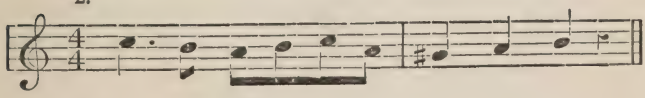
2. What is the principal and subordinate key?

3. (*a*) As the major and its relative minor have the same key signature, how do you know whether a key is major or minor? (*b*) In what keys are the following passages, and why?

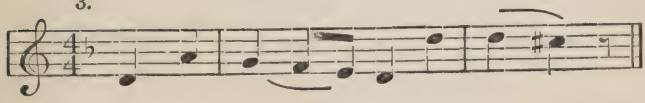
1.



2.

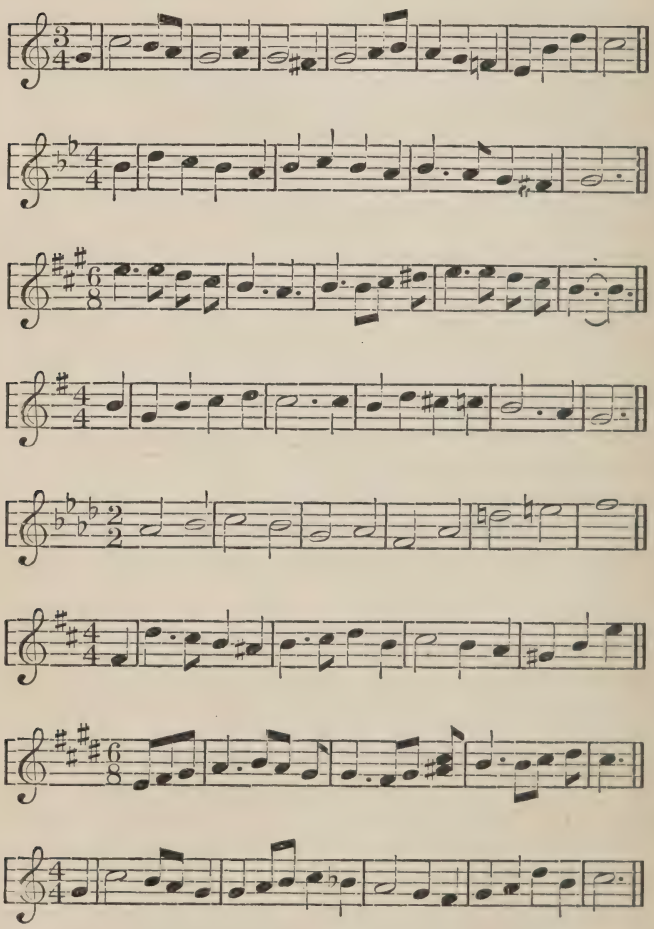


3.



4.

4. Name the principal and subordinate keys in the following passages :—

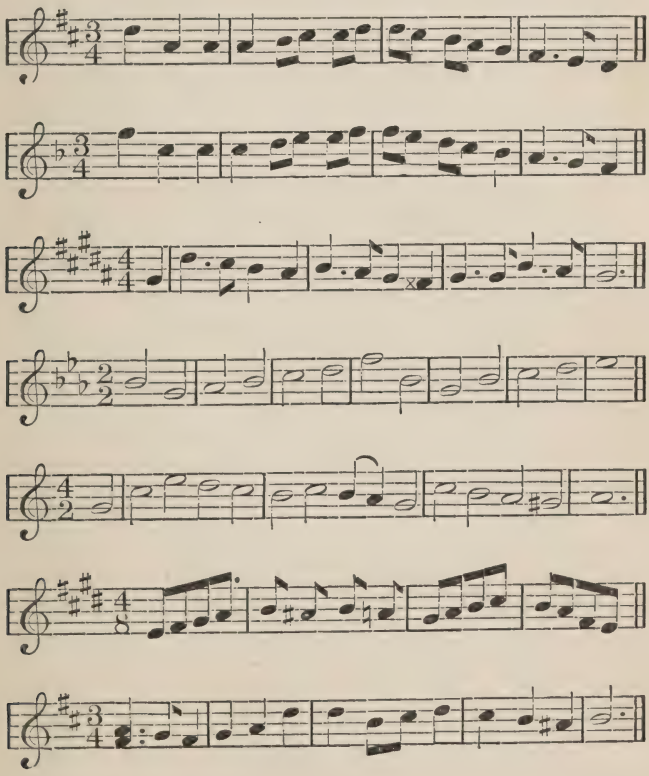


5. What is Modulation? Give an example of a

modulation into the key of the dominant, and into the key of the sub-dominant.

6. Define transition and passing notes.

7. In what keys are the following passages, and why?



CHAPTER VIII.

Transposition.

175. Scales differ from each other in *pitch*, for the relationship of the intervals of all scales is respectively similar. For instance, the scale of D is the scale of C removed or transposed a tone higher; and the scale of E♭ is the scale D transposed a semitone higher.

176. Sometimes a passage is either too high or too low for a certain voice, therefore it is often expedient, in order to bring it within the compass of that voice, to transpose it into another key.

177. TRANSPOSITION.—Transposition is the writing of a passage of music in a different key (either higher or lower) than that in which it is composed.

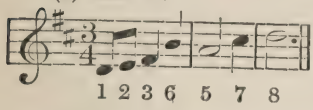
178. Rules for Transposing.—1. Write the signature of the scale into which the orginal passage has to be transposed, placing the required clef and time signature in their respective places.

2. Every note in the transposed passage must bear the same relation to its key-note or tonic as it does to the tonic in the original piece,—*e. g.*, if a note is five degrees from the tonic in the original composition, it must be five degrees from the *new* tonic.

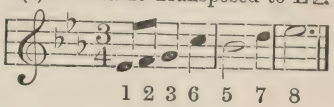
179. Example.—In transposing the following passage from the key of D to E♭, the signature of the latter scale is written on the new staff, and the time signature placed after it. The first note is D, the tonic; the second note E is *two* degrees from D

the tonic; the third note F is *three* degrees; the next note B is six degrees; and so on. If on the new staff we place notes bearing the same relation to the new tonic E♭ as the above notes do to D, we shall get a transposed passage.

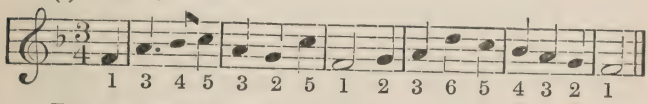
(*a*) KEY D.



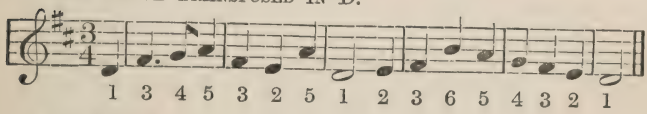
(*b*) The same Transposed to E♭.



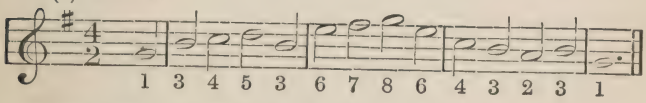
(*c*) KEY F.



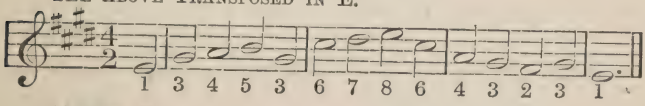
THE ABOVE TRANSPOSED IN D.



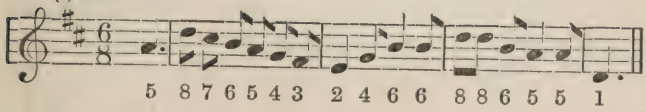
(*d*) KEY G.



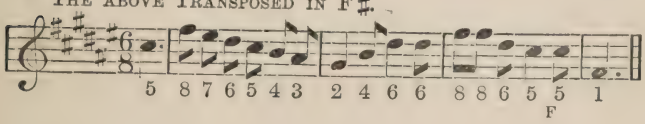
THE ABOVE TRANSPOSED IN E.



(*e*) KEY D.

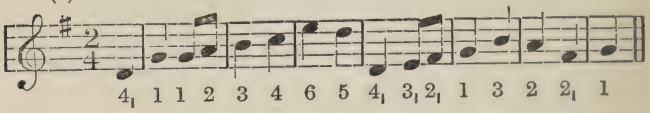


THE ABOVE TRANSPOSED IN F♯.

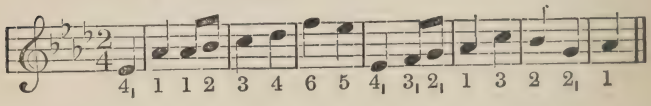


180. In the above examples the notes are all within the octave, and are written with figures 1, 2, 3, &c.; but in the following examples some of the notes are above the octave, or below the octave, and are written thus, 1_{I}, 2_{I}, 3_{I}, &c., when below; and $1'$, $2'$, $3'$, &c., when above.

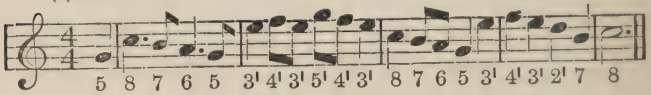
(*a*) Key G.



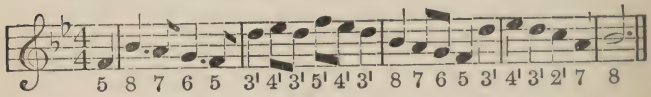
The above Transposed in A♭.



(*b*) Key C.

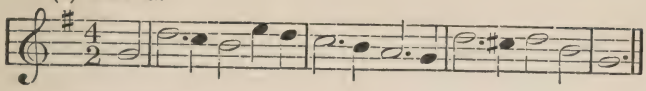


The above Transposed in B♭.

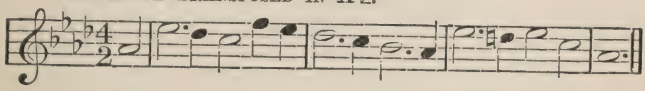


181. Sometimes certain notes of a composition are affected by accidentals; and in transposing it is necessary to see *how* each chromatic sign affects the note before which it is placed in the original piece, and then to use a corresponding sign in the transposed passage. A sharp in one key will sometimes be represented by a natural in another key; while, on the other hand, a natural will be occasionally represented by a sharp. Examples:—

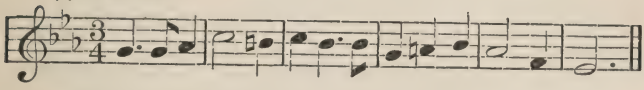
(*a*) Key G.



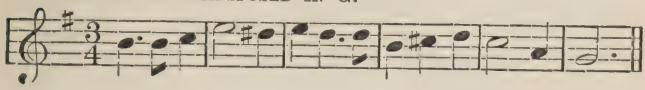
The above Transposed in A♭.



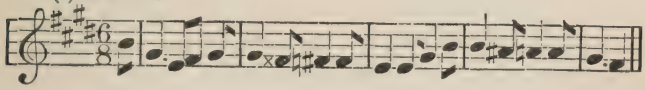
(*b*) Key E♭.



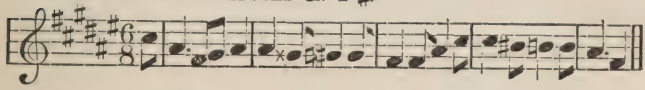
The above Transposed in G.



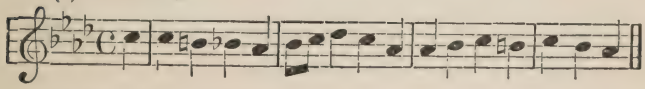
(*c*) Key E.



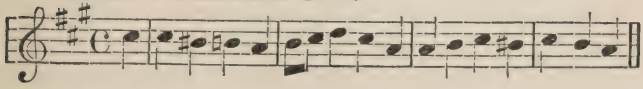
The above Transposed in F♯.



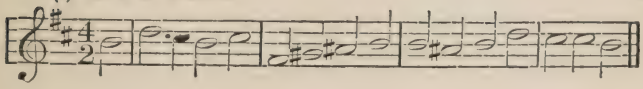
(*d*) Key A♭.



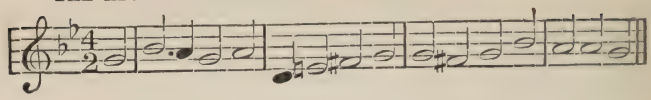
The above Transposed in A.



(*e*) Key B Minor.



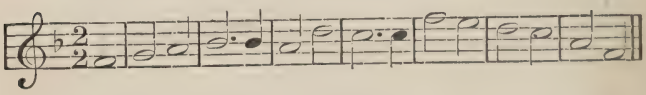
THE ABOVE TRANSPOSED IN G MINOR.



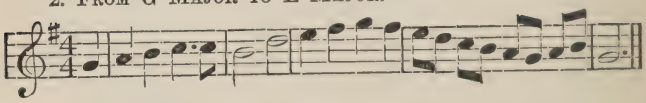
EXERCISE I.

Transpose the following passages:—

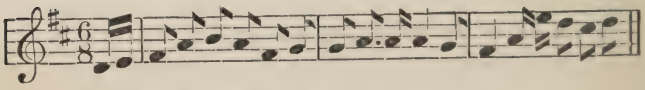
1. FROM F MAJOR TO D MAJOR.



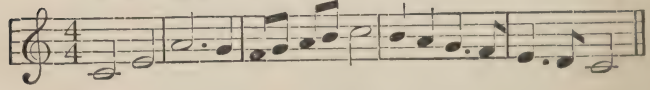
2. FROM G MAJOR TO E MAJOR.



3. FROM D MAJOR TO F MAJOR.



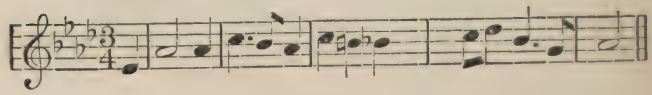
4. FROM C MAJOR TO G MAJOR.



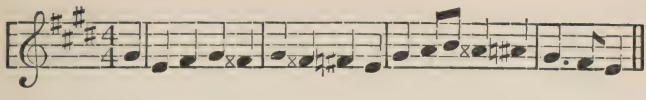
EXERCISE II.

Transpose the following pieces of music:—

1. IN A♭ TO B MAJOR.

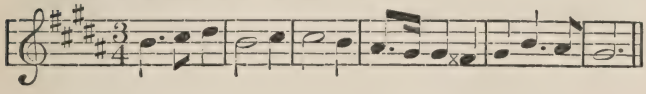


2. In E Major to G Major.



3. In B Minor to C♯ Minor.

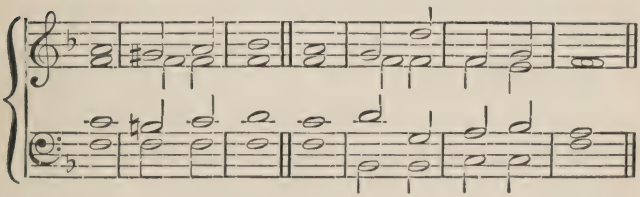
4. In G♯ Minor to D Minor.



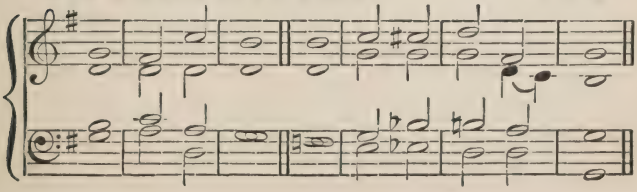
Exercise III.

Transpose the following:—

1. In F Major to E Major. J. L. W.



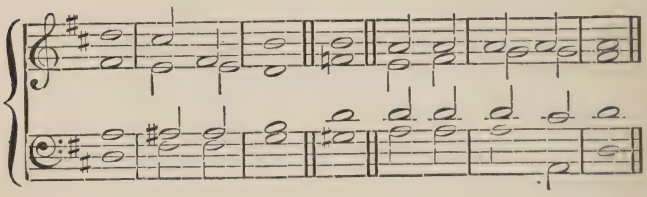
2. In G Major to G♭ Major. J. L. W.



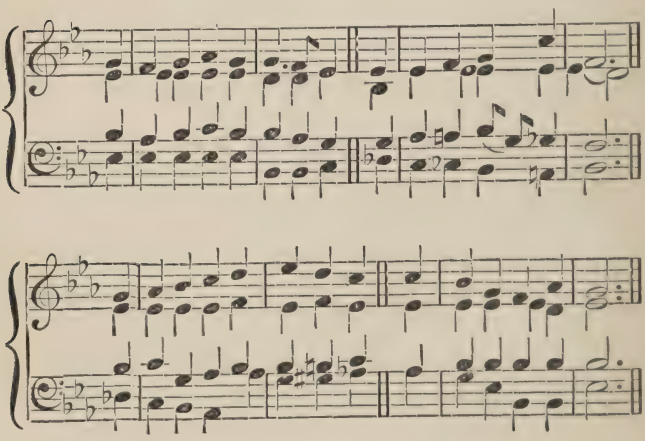
Exercise IV.

Transpose the following:—

1. In D to D♭ Major.



2. In E♭ to D♭ Major. W. Hoskins.



CHAPTER IX.

Abbreviations used in Music—Marks of Expression.

182. 8ve or 8va indicates that the notes over which it is placed are to be sung or played an octave higher.

183. A Pause (𝄐) placed over or under a note or rest indicates that the note or rest must be sustained beyond the regular time, the precise time, however, being left to the judgment of the performer.

184. A Repeat indicates that a passage is to be repeated from the beginning, the dots being placed by the side of the double bar (*a*); but when the passage is not to be repeated from the commencement, the dots are placed on both sides of a double bar (*b*).

a.

b.

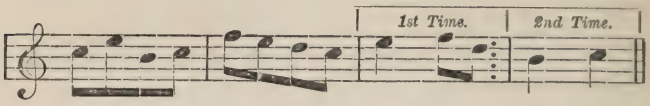
185. Bis placed over a passage means that the series of notes are to be repeated *twice*. Ter, three times.

186. D.C. or Da Capo (from the beginning) indicates that the passage is to be repeated from the beginning.

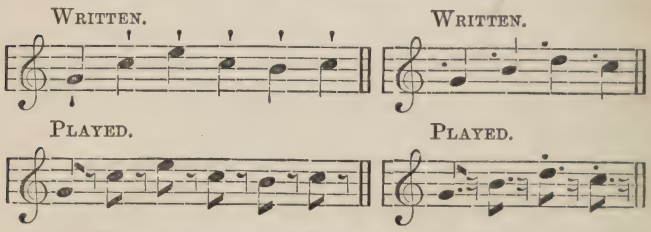
187. Fine (Italian, the end) is used to denote the conclusion of a passage, and is used in connection with the above.

188. D. S. or Dal Segno (from the sign) mean that the passage is not to be repeated from the beginning, but from the sign 𝄋.

189. 1MA VOLTA (1st time), and 2DA VOLTA (2nd time), are used when repetitions occur; the measures marked *1st time* are to be sung or played only once, and those marked *2nd time* are to be performed instead of them.

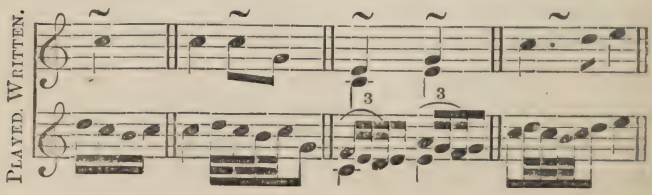


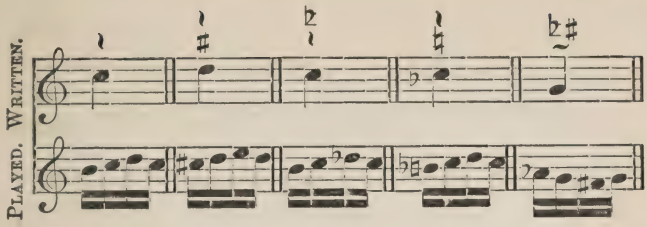
190. A STACCATO mark (ˈˈ or ••) is placed over a note to shew that a rest is to be given between each note although no rest is indicated.



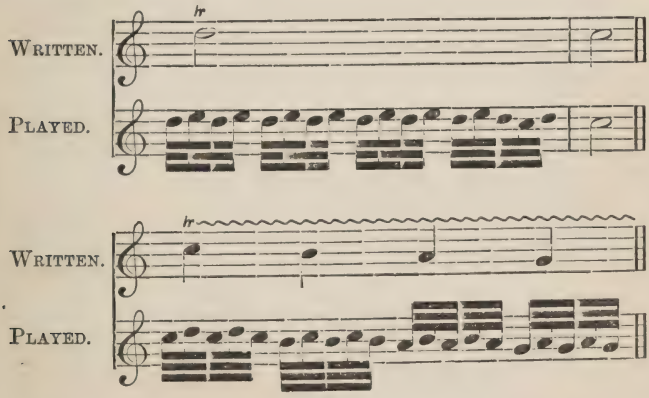
191. The TURN ~ is a sign representing a group of notes which consist of the *principal* note, or that note which is written, the note above, and the note below the principal note.

The INVERTED TURN ≀ commences on the note below the principal note. A sharp, flat, or natural, placed *above* a turn refers to the *upper* note, and when placed *under* the turn to the *lower* note.



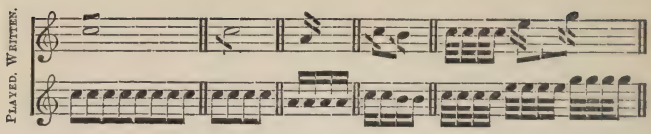


192. THE SHAKE, marked tr or tr~~~~~~~~~~, consists of the principal note, and the one immediately above it, which are sung or played alternately, during the value of the note, occasionally concluding with a turn, but not always.

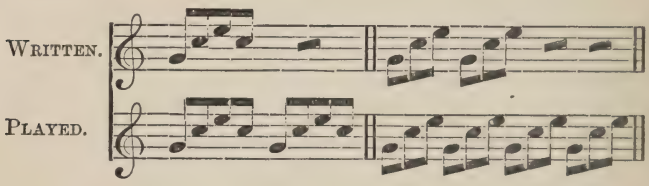


193. The following abbreviations are used in grouping notes:—

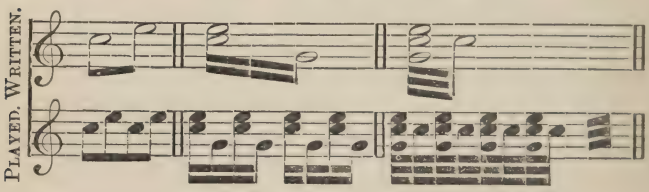
(1.) Thick lines are sometimes marked over, or through the stems of any note, and signify that the time of the note is to be divided. Thus, one line over a Semibreve indicates that it is to be repeated in *Quavers;* two lines indicate Semiquavers, &c.



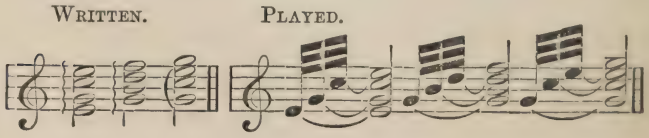
194. (2.) Short thick lines placed after a group of notes indicate that the preceding group is to be repeated,—*e. g.*,



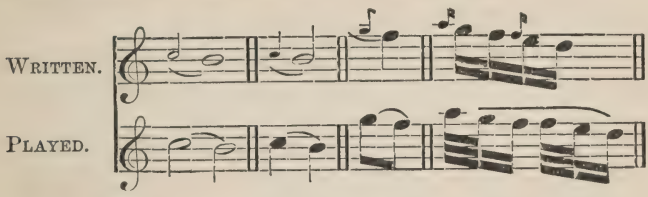
195. Minims are sometimes joined like Quavers, Semiquavers, Demisemiquavers, by one, two, or three lines, which signify that they are to be played alternately, as many times as will make up the duration of the notes indicated by the lines,—*e. g.*,



196. Arpeggio (Italian, harp) means that the notes of a chord are not to be struck together, but to follow each other as rapidly as possible. Signs are used to indicate this,—*e. g.*,



197. An APPOGGIATURA (Italian, to lean upon) is a small note, (in smaller type,) placed before a note, from which it takes one-half of the time.



198. The ACCIACCATURA (Italian, to crush) is a small note written thus ♪, and should be sounded as rapidly as possible.

199. A sign M. M. is occasionally placed at the beginning of a musical composition. The letters are a contraction for *Maelzel's Metronome*, which is an instrument used for the purpose of measuring motion with precision. It consists of a pendulum swinging in front of a scale, which is divided, generally from 50 to 160 degrees. The length of the pendulum may be varied by a movable regulator or weight, by means of which the pendulum may be made to oscillate any desired number of degrees in a minute; consequently, it can be made to swing from 50 to 160 times per minute. We can, therefore, measure the exact duration of any note. Thus 𝅗𝅥 = 60 would signify that each 𝅗𝅥 would move at the rate of the pendulum with the regulator at 60. M. M. ♩ = 60 means that there are to be 60 crotchet beats in one minute.

200. Various words derived from the Italian language are used to indicate the rate of movement of sounds. The following are the principal:—

Accelerando, quicker.
Adagio, deliberately.
Allegro, lively.
Allegro guisto, with force.
Allegro brilliante, brilliantly.
Allegro con fuoco, with animation.
Allegretto, cheerful, lively.
Andante, going at a moderate speed.
Andantino, going gently.
Grave, very slow and solemn.
Largo, broad, slow, nearly as slow as grave.
Larghetto, rather slow, but quicker than Largo.
Lento, slow.
Maesto, majestically.
Moderato, in moderate time.
Presto, quickly.
Prestissimo, very quickly.
Pomposo, with pomp.
Tempo comodo, in convenient time.

201. The following words, or abbreviations of words, are used to indicate the intensity of sound:—

p, soft.
pp, very soft.
ppp, soft as possible.
mp, *mezzo-piano*, moderately soft
f, *forte*, loud.
ff, *fortissimo*, very loud.
fff, as loud as possible.
mf, *mezzo-forte*, moderately loud.
Cres., *crescendo*, increasing in loudness.
Decres., *decresendo*, decreasing in loudness.
Dolce, soft.
Determinato, with determination.
Diminuendo, diminishing.
Doloroso, with grief or pain.
Rinforzando, *rinforz.*, with continued accent.
Sforzato, accented.

202. Gradual changes in the intensity of sounds are indicated in the following manner:—

<, or *Cres.*, or *crescendo*, gradually louder.
>, or *Dim.*, or *diminuendo*, gradually softer.
Atempo, in time.
Calando, gradually dying away.
Diluendo, dying away.
Morendo, expiring.
Perendosi, getting softer by degrees.
Rallo., or *Rallentando*, slackening the pace.
Ritaro., or *Ritardando*, holding back.
Sostenuto, sustained.
Smorzando, becoming extinct, extinquishing.
Stringendo, or *Strino.*, pressing onwards.
Tenuto, sustained.

203. The following words indicate the style or manner in which a composition has to be performed:—

Agitato, agitated.
Animato, animated.
A poco a poco, gradual.
Affetuoso, with tenderness.
Amoroso, affectionately, lovingly.
Ardito, with ardour.
Audace, boldly.
Brilliante, brilliantly, with display.
Con fuoco, with spirit.
Con moto, with motion.
Con tenerezza, with feeling.
Con expressione, with expression.
Elegante, with elegance.
Expressivo, with much feeling.
Giusto, in exact time.
Grazioso, graceful.
Legato, smoothly.
Maestoso, majestic, stately.
Mezzo, half.
Poco, little.
Vivace, lively.

Exercise I.

1. What is a Shake? Give an example.

2. Draw some of the abbreviations which are used in music for grouping notes.

3. Define Arpeggio, Acciaccatura, and Appoggiatura.

4. What is the meaning of each of the following terms:—*Presto*, *pomposo*, *sforzato*, *crescendo*, *con fuoco*, *agitato*, *vivace*, and *adagio*?

5. Give the signification of D.C., Bis., D.S., 1ma Volta.

6. Mention a few of the terms used in music to indicate gradual changes in the intensity of sounds.

Exercise II.

1. What is the meaning of the following marks of

expression:—*Grave, dolce, maesto, a poco a poco, con moto, grazioso, brilliante, rallentando, morendo, accellerando,* and *atempo.*

2. What is a Turn? How many kinds are there? Give an illustration of each kind.

3. What does a short thick line signify when placed after a group of notes?

4. Give the meaning of the following symbols and words:—*p, pp, ppp, f, ff, fff,* >, <, <>, 𝄿, *rallentando, diminuendo, andante, adagio, da capo, legato,* and *sostenuto?*

5. Give an example of an Appoggiatura.

6. What do the following mean:—Fine, Dal Segno, 2da Volta, Da Capo, Repeat, Pause, 8ve, Ter?

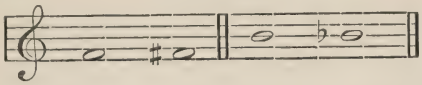
EXAMINATION PAPERS.

I.

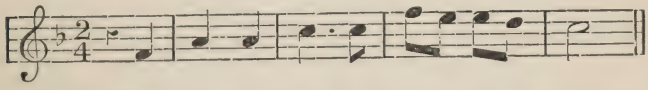
1. Write in Semibreves the Major Scale of C on the Treble Staff, prefixing the proper clef, and writing under each note its name according to pitch.

2. How many tones and semitones are there in a perfect fourth? in a minor sixth? in a major seventh? in an octave?

3. Add perfect fourths to the first and second of the following notes, and perfect fifths to the third and fourth:—



4. Write the annexed passage in common time, prefixing the proper time signature:—



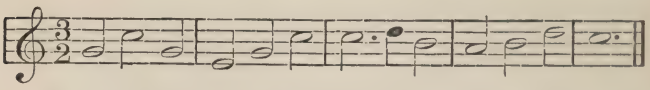
5. Express the following in musical symbols:— A minim, G crotchet, F crotchet, B dotted minim, C quaver, bar, minim rest, quaver rest, common time signature.

6. Explain the difference between time and accent. What are the kinds of triple time most frequently used? Give the signatures and explain them.

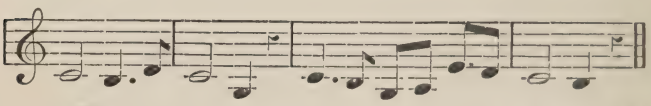
II.

1. In what time is the annexed passage of music

written? Write it in four Crotchet (*four-four*) time, prefixing the proper time signature, and mark each note that ought to be accented.

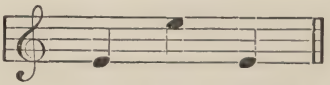


2. Write the following at the same pitch on the Bass Stave:—



3. What is the chromatic semitone above G? What the diatonic semitone before A?

4. Complete an ascending and descending *minor* scale between the notes here given, and state the major scale to which it is related.

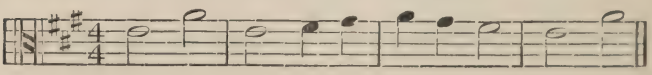


5. How may semitones are there in a perfect fourth, a sixth, an imperfect fifth, a diminished seventh, an augmented sixth, a minor seventh, a minor third, and a major third?

6. Give some account of the classification of voices, with the average compass of each kind.

III.

1. In what clef is the annexed passage written? Write beneath each note its pitch name.



2. Write the following in musical characters on the Treble Staff:—G clef, signature for the key of B flat, common time signature, minim rest, crotchet rest, F crotchet, bar, B minim, G dotted crotchet, F quaver, bar, E minim, F minim, bar, G dotted minim, crotchet rest, bar, minim rest, B minim, bar, C semibreve, double bar.

3. What notes in the scale of A♭ are separated by semitones?

4. Transpose the following passage to the key of A♭:—

5. Give the signatures of the major scales of A, A♭, E, E♭, F, F♯.

6. Define rhythm, accent, and time. Write a passage of music of six measures in $\frac{6}{8}$ time, varying the notes in each measure.

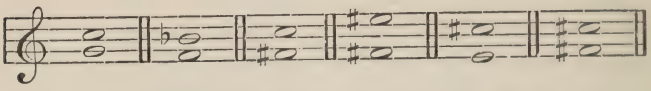
7. What note in the scale (or key) of F corresponds with, or occupies the same place as F in the scale of C.

IV.

1. What is meant by transition from one key to another? Shew how it is effected, and give one or two examples:—

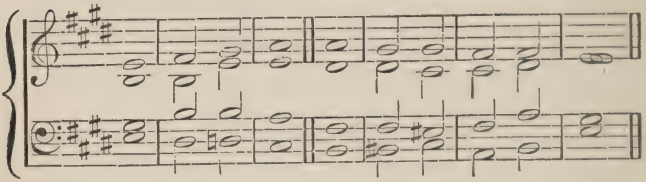
2. Write descending tetrachords from E♭, A, B; and ascending ones from C, G, B♭.

3. Over each of the following pairs of notes write the name and quality of it, and the interval it forms:—



4. Transpose the following chant in E, to G♭:—

W. Hoskins.

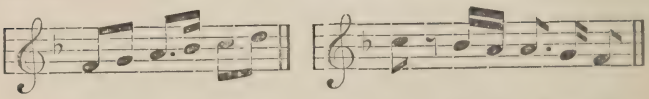


5. Give the meaning of the following words and abbreviations:—*Largo*, *adagio*, *da capo*, *rallentando*, *diminuendo*, *a tempo*, *dolce*, *vivace*, *legato*, *p*, *f*, *pp*, *ff*, *pf*, and *fff*.

6. Explain the succession of sharp keys, and shew how they are derived from each other.

V.

1. Give the time signatures of the following measures:—

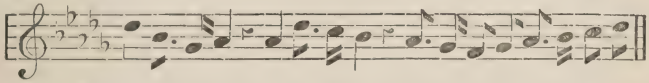


2. Give the relative minor keys of the following major keys:—E, A, B, C♯, D, F, B♭.

3. Shew by examples where the accent falls in common time, and in triple time.

4. Give the contents (tones and semitones) of the interval from the first to the second sound of the major scale, from the first to the third, first to fourth, first to fifth, first to sixth, first to eighth. Give the exact name of each interval.

5. Distribute the passage of music below into two different kinds of time.



6. Give examples of syncopation, tie, slur, and emphasis.

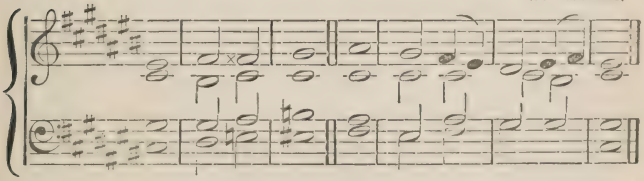
VI.

1. Where do the semitones fall in the major and minor scales respectively? What is meant by the relative minor of a major key? How is the one related to the other?

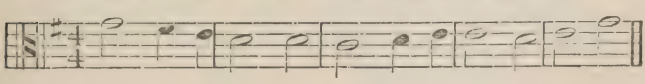
2. Write on the Treble Staff the signatures of the scales of E, A, B, C, F, G, D, E♭, A♭, B♭, C♯; and write in full the ascending minor scale of the first.

3. Transpose the following chant in C♯ to D:—

W. Hoskins.



4. In what clef is the annexed passage written? Write beneath each note its name according to pitch.



5. Explain what is meant by the diatonic scale. Write it out both in the major and minor form.

6. What is meant by the inversion of an interval? What do the second, third, fourth, fifth, sixth, seventh, become when inverted? What are the inversions of a perfect fourth, a minor sixth, a minor third, a major seventh, and a major third?

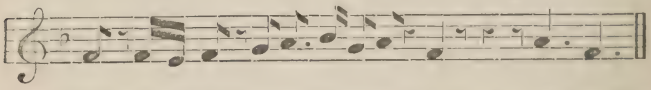
VII.

1. Describe briefly the difference between simple and compound time, and give an example of every kind of time with which you are acquainted.

2. Write under each of the following intervals its name and quality,—*e. g.*, major third or other:—

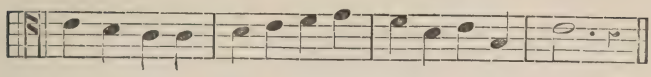
3. Write the upper tetrachord of the scale of E minor, on the Treble Staff, in every form with which you are acquainted.

4. Divide the following passage into measures of six-eight time:—



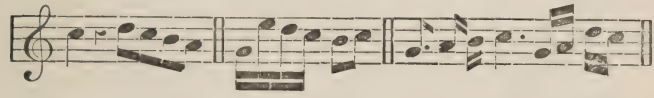
5. Write the following in musical characters on the Treble Staff:—G clef, signature for the key of F, six-eight time signature, F quaver, quaver rest, F and E semiquavers, F quaver, quaver rest, G quaver, bar, A dotted quaver, B semiquaver, G and A quavers, F quaver, double bar.

6. Write the names of the following notes:—



VIII.

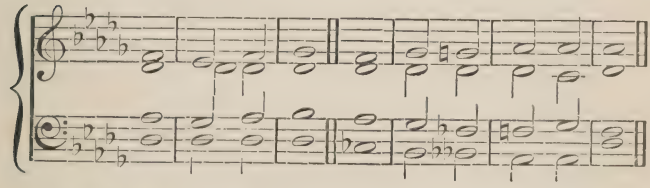
1. Place time signatures at the beginning of each of the following measures:—



2. Give the relative minor scales of the following major scales:—A, C, E, B♭, E♭; and write the ascending and descending minor scale of D, marking the position of the semitones.

3. How can intervals be classified? Give some examples of major, minor, augmented, diminished, and perfect intervals.

4. Transpose the following chant in D♭ to E:—



5. What is the rule for ascertaining the major key-note when sharps are used in the signature?

6. Which sounds of the scale are called (1) dominant, (2) mediant, (3) tonic, (4) leading note, (5) sub-dominant, (6) key note, (7) octave?

INDEX.

**** The Numbers refer to the Paragraphs.*

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34. Take the difference between £37, 9s. 9½d. and £50 from the sum of 19s. 7½d. and £60, 13s. 5¾d.

35. If I pay 4 guineas for a suit of clothes, a guinea for a pair of boots, and half-a-guinea for a hat; what change shall I have out of a ten-pound note?

36. A man had in his pocket 3 crowns, 5 half-crowns, 9 florins, and 15 groats; he spent a guinea and a half; how much had he left?

37. If a chair costs six half-crowns, and a stool costs half-a-guinea less than the chair; what is the total cost?

38. A shoemaker bought fifty pounds worth of leather from a currier; he paid £45 and made him 2 pairs of boots at a guinea and a half per pair; how does the account stand?

39. From a hundred pounds take the sum of 3 ten-pound notes, twenty guineas, 7 half-crowns, and 25 florins.

40. A man bought a piano for £30; he paid £8, 10s. then and £5, 12s. 6d. afterwards; how much had he still to pay?

41. What is the difference between 246 pence, and the sum of 60 farthings, 143 pence, and 79 shillings?

42. A lady buys 20 yards of ribbon at 10d. a yard, 5 yards of silk at 2s. 6d. a yard, and 6 pocket-handkerchiefs at 12s. 6d. a dozen; how much short of £2 does she spend?

43. The difference between 3 florins and 2 half-crowns is given to a boy and a girl; the girl receives 7d.; what is the boy's share?

44. If a man borrows fifty pounds agreeing to pay £2, 12s. 6d. for the use of the money, how much does he owe when he has repaid £17, 17s. 6d. and 3 five-pound notes?

45. A gentleman divided £5 between a man, a woman, and a boy; he gave the woman £1, 12s. 6d. and the boy 13 florins; how much did the man get?

46. Add the sum and difference of 99 pence and 99 farthings.

47. Having paid into the bank £13, 17s. 6d. and a ten-pound note, and having drawn out 3 five-pound notes and 7 guineas; how much remains in the bank?

48. A man's wages are 33s. 6d. per week; he pays 3s. 6d. per week for rent, 16s. 9d. for food and clothing, and 17s. 6d. for other expenses; how much less ought he to spend not to run in debt?

49. Find the difference between the sum of 70 farthings and 150 pence, and the sum of 40 farthings and 250 pence.

50. A man owes his baker £3, 15s. 9d., and his shoemaker £2, 15s. 10d. less than this sum; how much does he owe the two together?

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